

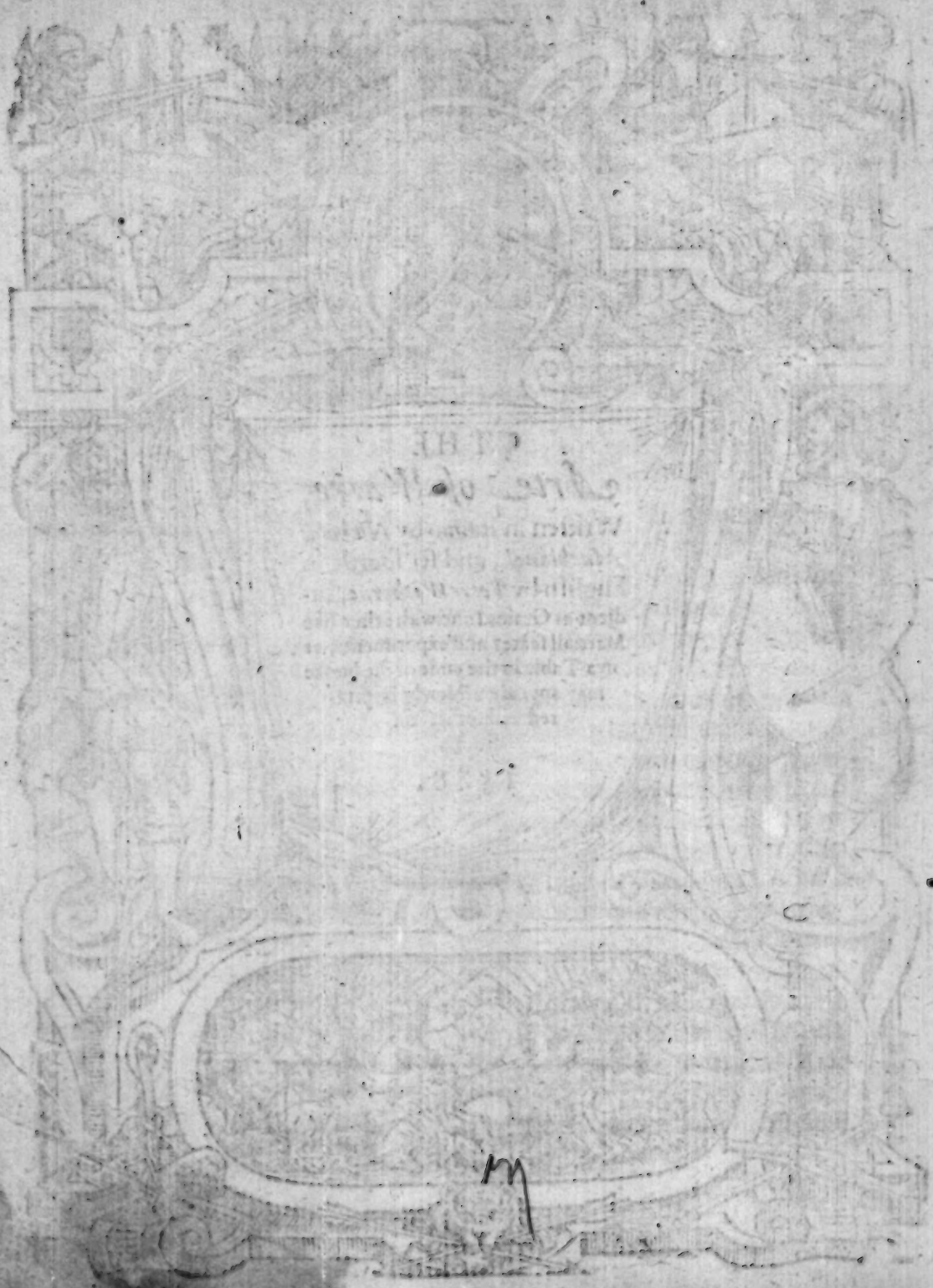


¶ THE  
*Arte of Warre,*

Written in Italian by *Nicholas Machiavel*, and set forth in English by *Peter Withorne*, student at Graies Inne: with other like Martiall feates and experiments, as in a Table in the end of the booke may appeare. Newly imprinted with other additions.

1588.





**To the most high, and excellent**  
 Princes, Elizabeth, by the grace of God Queene of Eng-  
 land, Fraunce, and Ireland, defender of the Faith, and  
 of the Church of England, and Ireland, on  
 Earth next vnder God, the su-  
 preme Gouvernour.



Although commonly euery man,  
 most worthy and renowned So-  
 ueraigne, seeketh specially to  
 commende and extoll the thing,  
 wherunto he seeleth himselfe na-  
 turally bent & inclined, yet allsuch  
 parcialitie and priuate affection  
 laid aside, it is to be thought (that  
 for the defence, maintenance, and  
 aduancement of a Kingdome, or Common weale, or  
 for the good and due obseruation of peace, and admi-  
 nistracion of iustice in the same) no one thing to be moze  
 profitable, necessarie, or moze honourable, the the know-  
 ledge of seruice in warre, and deedes of armes, because  
 considering the ambition of the world, it is impossible  
 for any Realme or Dominion long to continue free in  
 quietnes and sauegard, where the defence of the sword  
 is not alwaies in a readinesse. For like as the Grekes,  
 being occupied about trilling matters, taking pleasure  
 in resiting of Comedies, and such other vaine things,  
 altogether neglecting Partiall seats, gaue occasion to  
 Philip king of Macedonia, father to Alexander the  
 great, to oppresse and to bring them in seruitude, vnder  
 his subiection: euen so vndoubtedly, libertie will not be  
 kept, but men shall be troden vnder fote, and brought  
 to most horrible miserie and calamitie, if they giuing  
 themselues to pastimes and pleasure, forsake the iust re-  
 gard of their owne defence, & sauegard of their countrie,  
 which in temporall regiment, chiefly consisteth in war-  
 like skilfulnes. And therefore the auncient Captaines

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and mightie Conquerours, so long as they florished, did deuise with most great diligence, all maner of wayes, to bring their men to the perfect knowledge of what so euer thing appertained to the warre, as manifestly appeareth by the warlike games, which in olde time the Princes of Grecia ordained vpon the mount Olympus, and also by the orders and exercises, that the auncient Romanes vsed in sundrie places, and specially in Campo Martio, and in their wonderfull sumptuous Theaters, which chiefly they builded to that purpose. Wherby they not onely made their souldiours so expert, that they obtained with a few, in fighting against a great huge multitude of enemies, such maruailous victories, as in many credible histories are mentioned, but also by the same meanes, their vnarmed rascall people that followed their Campes, got such vnderstanding in the feats of warre, that they in the day of battail, being left destitute of succour, were able without any other helpe to set themselves in good order, for their defence against the enemy, that would seeke to hurt them, and in such dangerous times, haue done their countrie so good seruice, that verie often by their helpe, the aduersaries haue bene put to flight, and fieldes most happily wonne. So that the antiquitie esteemed nothing more happy in a common weale, then to haue in the same many men skillfull in warlike affaires: by meanes wherof their Empire continually enlarged, & most wonderfully and triumphantly prospered. For so long as men for their valiauntnes, were then rewarded and had in estimation, glad was he that could finde occasion to venture, yea and spend his life to benefite his countrie: as by the manly actes that Marcus Curtius, Oratius Cocles, & Gaius Mucius did for the sauegard of Rome, & also by other innumerable like examples, doth plainly appeare. But when through long & continual peace, they began to be altogether giuen to pleasure and delicatenes, little regardin



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garding Martiall feats, nor such as were expert in the practise thereof. Their dominion and estates, did not so much before increase and prosper, as the by such meanes and oversight, they sodainly fell into decay & vtter ruine. For such truly is the nature & condicion, both of peace and warre, that where in gouernment there is not had equall consideration of them both, the one in fine doth worke and induce the others obliuion, and vtter abhollition. Wherefore, sith the necessitie of the science of warres is so great, and also the necessarie vse therof so manifest, y euen Ladie Peace hir selfe, doth in manner from thence craue hir chiefe defence & preservation, and the worthinesse moreouer, and honour of the same so great, that as by proofe we see, the perfect glorie thereof, cannot easile finde roote, but in the hearts of most noble, couragious & manlike personages. I thought most excellent Princes, I could not either to the speciall gratefying of your highnes, the vniuersall delight of all studious gentlemen, or the common vtilitie of the publique wealth, imploy my laboures more profitable in accomplishing of my dutie and god will, then in setting forth some thing, that might induce to the augmenting and increase of the knowledge thereof: in especially the example of your highnesse most politike gouernment ouer vs, giuing plaine testimonie of the wonderfull prudent desire that is in you, to haue your people instructed in this kind of seruice, as well for the better defence of your Highnes, them selues, and their countrie, as also to discourage thereby, and to be able to resist the malignitie of the enemy, who otherwise would seeke peraduenture to inuade this noble realme or kingdome.

When therefore about ten yeares past, in the Enterprours warres against the Mozes, & certaine Turkes being in Barberie: at the siege and winning of Calibia, Monesterio, and Affrica, I had as well for my further instruction in those affaires, as also the better to

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acquaint mee with the Italian tongue, reduced into English, the booke called The arte of Warre, of the famous and excellent Nicholas Machiauel, which in times past he being a counsaillour, and Secretarie of the noble citie of Florence, not without his great laud and praise did write: and hauing lately againe, somewhat perused the same, the which in such continuall broyles, and vnquietnes, was by mee translated, I determined with my selfe, by publishing therof, to bestow as great a gift (since greater I was not able) amongst my countrie men, not expert in the Italian togue, as in like works I had seene before mee, the Frenchmen, Dutchmen, Spaniards, and other forreine nations, most louingly to haue bestowed among theirs: The rather vndoubtedly, that as by priuate reading of the same booke, I then felt my selfe in that knowledge maruailously holpe & increased, so by communicating the same to many, our Englishmen finding out the ordering and disposing of exploitcs of warre therein contained, the aide and direction of these plaine and brieve precepts, might no lesse in knowledge of warres become incomparable, then in proues also and exercise of the same altogether inuincible: which my translation most gracious Soueraigne, together with such other things, as by me hath bene gathered, & thought good to adde thereunto, I haue presumed to dedicate vnto your highnes: not onely because the whole charge and furniture of warlike counsailes and preparations, being determined by the arbitrement of Gouvernours and Princes, the treatise also of like effect should in like maner as of right depend, vpon the protection of a most worthy and noble Watronesse, but also that the discourse it selfe, and the worke of a foraine author, vnder the passport and safeconduite of your highnes most noble name, might by speciall authoritie of the same, winne amongst your Maiesties subiectes, much better credite and estimation, And if most mighty  
Quene

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Quene, in this kinde of Philosophie (if I may so terme it) graue and sage counsailes, learned & huttie precepts, or polittike and prudent admonitions, ought not to be accounted the least and basest ietwells of weale publike. Then dare I boldly affirme, that of many straungers, which from foreine countries, haue heretofore in this your Maiesties realme arrived, there is none in comparison to be preferred, before this worthy Florentine & Italian, who hauing freely without any gaine of exchange (as after some acquaintaunce and familiaritie will better appeare) brought with him most rich, rare and plentifull Treasure, shall deserue I trust of all good English hearts, most louingly and freindly to be entertained, embraced and cherished. Whose new English apparel, how so euer it shall seme by mee, after a grosse fashion, more fitly appointed to the Campe, then in nice termes atired to the Carpet, and in course clothing rather put forth to battaile, then in any braue shew prepared to the banquet, neuerthelesse my god will I trust, shall of your grace be taken in good part, hauing fashioned the praise of my rude stile, even according to the purpose of my traile, which was rather to profite the desirous man of warre, then to delight the eares of the fine Rethorician, or daintie curious scholeman. Most humbly beseeching your highnes, so to accept my labour herein, as the first frutes of a poore souldiours studie, who to the uttermost of his final power, in the seruice of your most gracious maiestie, and of his countrie, will at all times, according to his boundent duetie and alleageaunce, promptly yeeld himselfe to any labour, trauaile, or danger, what so euer shall happen. Praying in the meane season the almightie God, to giue your highnes in long prosperous raigne, perfect health, desired tranquillitie, and against all your enemies, lucky and ioyfull victorie.

Your humble subiect and dayly

orator, Peter Whiteborne.





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The Proheme of Nicholas Ma-

chiauel, Citezen and Secretary of Florence,

upon his booke of the *Arte of Warre*, unto Laurence Philippe Strozze, one of the Nobilitie of Florence.

**H**ere haue Laurence, many held, and doe hold this opinion, that there is no maner of thing, which lesse agreeth the one with the other, no: that is so much unlike, as the ciuill life, to a Souldiours. Whereby it is often sene, that if any determine in the exercise of that kinde of seruice to preuaile, that incontinent he doth not onely chaunge in apparell, but also in custome and maner, in voyce, and from the fashion of all ciuill vse, he doth alter: For that he thinketh not meete to cloth with ciuill apparell, him who will be redy, and prompt to all kinde of violence, no: the ciuill customs, and vices may that man haue, the which together both those customes to be effeminate, and those vices not be agreeable to his profession: For it seemes not conuenient for him to vse the ciuill gesture and ordinarie wordes, who with facing and blasphemies, will make afraied other men: the which causeth in this time, such opinion to be most true. But if they should consider the auncient orders, there should nothing be found more vnted, more confirmable, and that of necessitie ought to loue so much the one the other, as these: for as much as all the artes that are ordeyned in a common weale, in regard or respect of common profite of men, all the orders made in the same, to liue with feare of the Lawe, and of God, should bee vaine, if by force of

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armies their defence, were not prepared, which well ordeyned, doe maintaine those also which be not well ordeyned. And likewise to the contrarie, the good orders, without the Souldiours helpe, no lesse or otherwise do disorder, then the habitation of a sumptuous & royall palais, although it were deckt with golde and precious stones, when without being couered, should not haue wherewith to defend it from the raine. And if in what so euer other orders of cities and kingdomes there hath bene vsed all diligence to, to maintaine men faithfull, peaceable, and full of the feare of God, in the service of warre, it was doubled: for in what man ought the contrarie to seeke greater faith, then in him, who must promise to die for the same: In whom ought there to be more loue of peate, then in him, which onely by the warre may be hurt: In whome ought there to be more feare of God, then in him, which euerie day committing him selfe to infinite perills, hath most neede of his helpe. This necessitie considered well, both of them that gaue the lawes to Emperors, and of those that to the exercise of seruise were appointed, made that the life of Souldiours, of other men was praised, and with all studie followed and imitated. But the orders of seruise of warre, being altogether corrupted, and a great way from the auncient maners altered, there hath growne these sinistrous opinions, which maketh men to hate the warlike seruise, and to shun the conuersation of those that do exercise it. Albeit I iudging by the same, that I haue seene & read, that it is not a thing impossible, to bring it againe to the auncient maners, and to giue it some fashion of the vertue passed, I haue determined to the intent not to passe this my idle tyme, without doing some thing, to write that which I do vnderstand, of the arte of warre, to the satisfiying of those, who are louers of auncient actes. And although it be a bolde thing to intreat of the same matter, whereof other wise I haue made no profession



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tion, notwithstanding I beleeue it is no errour to occupie with wordes a degree, the which many with greater presumption with their daedes haue occupied: for as much as the errours that I may happen to make by writing, may be without harme to any man corrected: but those the which of them be made in doing, can not be knowen without the ruine of Empirers. Therefore Laurence you ought to consider the qualitie of this my labour, and with your iudgement to giue it that blame, or that praise, as shall seme vnto you it hath deserued. The which I send vnto you, as well to shew my selfe gratefull, although my abilitie reche not to the benefites, which I haue receiued of you, as also for that being the custome to honour with like workes them, who for nobilitie, riches, wisdome, and liberallitie, do shine: I know you for riches and nobilitie, not to haue many peeres, for wisdome few, and for liberallitie, none.

FINIS.

A.ii.





*The first booke of the arte of Warre,*

of Nicholas Machiavel, Citezen and Secretarie  
of Florence, vnto Laurence Philip Strozze,  
one of the Nobilitie of  
Florence.



As much as I beleue that after death, all menne may be praised without charge, all occasions and suspect of flattery being taken away, I shall not doubt to praise our Cosimo Ruchellay, whose name was neuer remembred of mee without teares, hauing knowen in him those conditions, the which in a good friend or in a Citezen, might of his friends, or of his countrie, be desired: for that I do not know what thing was so much his, not so excepting any thing (sauiing his soule) which for his friends willingly of him should not haue bene spent: I know not what enterprise should haue made him afraied, where the same should haue bene knowen to haue bene for the benefit of his countrey. And I do plainely confesse, not to haue met amongst so many men, as I haue knowen, and practised withall, a man, whose minde was more inflamed then his, vnto great and magnificent thinges. For he lamented not with his friendes of any thing at his death, but because he was bozne to die a young man within his owne house, before hee had gotten honour, and according to his desire, holpen any man: for that he knew, that of him could not bee spoken no other, sauiing that there should be dead a good friend. Yet it resteth not for this, that wee, and what soeuer other that as we did know him, are not able to testifie (seeing his woelies do not appeare) of his laudable qualities. True it



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It is, that fortune was not for all this, so much his enemy, that it left not some brieve recorde of the readynesse of his wit, as doth declare certayne of his writings, and setting forth of amorous verses, wherein (although he were not in love) yet for that he would not consume tyme in vayne, till vnto profounder studies Fortune should haue brought him, in his youthfull age he exercised himselfe. Whereby most plainly may be comprehended, with how much felicity he did discribe his conceiptes, and how much for Poetrie he should haue bene esteemed, if the same for the ende thereof, had of him bene exercised. Fortune hauing therefore deprived vs from the vse of so great a friend, mee thinketh there can be found no other remedy, then as much as is possible, to seeke to enioy the memory of the same, and to repeate such thinges as hath bene of him either wittely saide, or wysely disputed. And for as much as there is nothing of him more freshe, then the reasoning, the which in his last daies Seignior Fabritio Collonna, in his Orchard had with him, where largely of the same gentleman were disputed matters of warre, both wittely and prudently, for the most parte of Cosimo demaunded, I thought good for that I was present there with certayne other of our friends, to bring it to memory, so that reading the same the friends of Cosimo, which thither came, might renew in their myndes, the remembraunce of his vertue: and the other part beyng sorry for their absence, might partly learne hereby many thinges profitable, not onely to the lyfe of Souldiours, but also to ciuill mens lyues, which grauely of a most wise man was disputed. Therefore I say, that Fabritio Collonna retourning out of Lomberdie, where long tyme greatly to his glory, he had serued in the warres the Catholique King, he determined, passing by Florence, to rest him selfe certayne dayes in the same citie, to visite

visite the Dukes excellencie, and to see certaine gentilmen, which in times past hee had bene acquainted withall. For which cause vnto Cosimo it was thought best to bid him into his Orchard, not so much to vse his liberality, as to haue occasion to talke with him at leasure, and of him to vnderstand and to learne diuers things, according as of such a man may be hoped. Seeing thus to haue occasion to spend a day in reasoning of such matters, which to his mind should best satisfy him. When Fabritio came, according to his desyre, and was receiued of Cosimo, together with certaine of his trusty friendes; amongst whom were Zanoby Buondelmonti, Baptiste Palla, and Luigi Allamanni, all young men loued of him, and of the very same studies most ardent, whose good qualities, for as much as euery day, and at euery houre they do praise themselves, we will omit. Fabritio was then according to the time and place honoured, of al these honours, that they could possible desire: But the banquetting pleasures being passed, and the table taken vp, and al preparation of feasting consumed, the which are some at an end in sight of great men, who to honozable studies haue their mindes set, the day being long, and the heat much, Cosimo indged for to content better his desire, that it were well done, taking occasion to auoyd the heate, to bring him into the most secrete and shadowest place of his garden.

Where they being come, and caused to sit, some vpon herbes, some in the coldest places, other vpon litle seats which there was ordained, vnder the shadow of most high trees, Fabritio praiseth the place, to be delectable, and particularly considering the trees, and not knowing some of them he did stand musing in his mind, whether of Cosimo being aware, said, you haue not peradventure bene acquainted with some of these sortes of trees: But do not maruaile at it, for as much as there be some, that were more esteemed of the antiquitie, then they

How Senior  
Fabritio Col-  
onna & other  
gentlemen be-  
ing together  
in a garden,  
entered into  
talke of mat-  
ters of warre.

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they are commonly now a daies: and he tolde him the names of them, and howe Barnardo his graundfather did trauaile in such kinde of planting: Fabricio replied, I thought it should be the same you saye, and this place, and this study, made me to remember certaine Princes of the Kingdome of Naples, which of these auncient tillage and shadow doe delight. And staying vpon this talke, and somewhat standing in a studie, said moreouer, if I thought I should not offende, I would tell my opinion, but I beleue I shall not, communing with friends, and to dispute of thinges, and not to condempne them. How much better they should haue done (be it spoken without displeasure to any man) to haue sought to be like the antiquitie in thinges strong, and sharpe, not in the delicate and soft: and in those that they did in the Sunne, not in the shadowe: and to take the true and perfect maners of the antiquitie: not those that are false and corrupted: for that when these studies pleased my Romaynes, my countrey fell into ruine. Vnto which Cosimo answered. But to auoide the tediousnesse to reapeate so many times he saide, and the other answered, there shalbe onely noted the names of those that speakes, without rehearsing other.

Then Cosimo saide, you haue opened the way of a reasoning, which I haue desired, and I praye you that you will speake without respect, for that, that I without respect will aske you, and if I demaunding, or replying shall excuse, or accuse any, it shall not be to excuse, or accuse, but to vnderstand of you the trueneth.

Fabricio. And I shall be very well contented to tell you that, which I vnderstand of all the same that you shall aske me, the which if it shall be true, or no, I will reporte mee to your iudgement: and I will bee glad that you aske mee, for that I am to learne, as well of you in asking mee, as you of mee in answering you: so, as much as many times, a wise demaunder, maketh



keeth one to consider many things, and to know many o-  
ther, which without hauing bene demaunded, he should  
neuer haue knowen, Cosimo. I wil retourne to the same  
that you said first, that my graundfather and those your  
Princes, should haue done more wisely, to haue resem-  
bled the antiquitie in hard things, then in the delicate,  
& I will excuse my part, for that, the other I shall leaue  
to excuse for you. I do not beleue that in this time was  
any man, that so much detested the liuing in ease, as he  
did, and that so much was a louer of the same hardnesse  
of life, which you praise: notwithstanding he knew not  
how to be able in person, nor in those of his sonnes to  
use it, being borne in so corrupte a worlde, where one  
that would digresse from the common use, should bee  
infamed and disdayned of euery man: considering that if  
one in the hottest day of Summer being naked, should  
swallow himselfe vpon the Sand, or in Winter in the  
most coldest monethes vpon the Snowe, as Deogenes  
did, he should be taken as a foole. If one (as the Spar-  
cans were wont to do) should nourish his children in a  
billage, making the to sleepe in the open ayre, to go with  
head and feete naked, to wash them selues in the colde  
water for to harden them, to be able to abide much  
payne, and for to make them to loue lesse life, & to feare  
lesse death, he should be scorned, and soner taken as a  
wilde beast, then as a man. If there were seene also one,  
to nourish himselfe with peason and beanes, and to de-  
spise gold, as Fabritio doth, he should be praised of few,  
and followed of none: so that he being afraied of this  
present maner of liuing, he left the auncient facions, and  
the same, that he could with least admiration imitate in  
the antiquitie, he did.

Fabritio. You haue excused it in this part most  
strongly, and surely you say the truth: but I dyd not  
speake so much of this hard maner of lyuing, as of o-  
ther maners more humaine, and which haue with the  
life

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life now a dayes greater conformitie. The which I do not beleue y it hath bin difficult to bring to passe vnto one, who is numbred among Princes of a Citie: for the prouing wherof, I wil neuer seeke other, then the example of the Romanes: whose liues, if they were wel considered, & the orders of the same common weale, there should therin be seene many things, not impossible to induce into a cominalty, so that it had in her any good thing. Cosi. What things are those that you would induce like vnto the antiquity. Fabr. To honoz & to reward vertue, not to despise pouerty, to esteeme the manners and orders of warfare, to constraine the Citizens to loue one another, to liue without sectes, to esteeme lesse the priuate, then the publike, & other like things, that easily might be with this time accompanied: the which manners are not difficult to bring to passe, when a man should wel consider them, and enter therein by due meanes: for as much as in the same, the truth so much appeareth, that euery common wit, may easily perceyue it: which thing, who that ordeineth, doth plant trees, vnder the shadow whereof they abide more happy, and more pleasantly, then vnder these shadowes of this godly garden. Cosimo. I will not speak any thing against the same that you haue said, but I wil leaue it to be iudged of those, whom easily can iudge, and I will turne my communication to you, that is an accuser of them, the which in graue, and great doings, are not folowers of the antiquity, thinking by this way more easily to be in my intent satisfied. Therfore, I would know of you wherof it groweth, that of the one side you condemne those that in their doings resemble not the antiquity? Of the other in the warre, which is your Arte, wherein you are iudged excellent, it is not seene that you haue indeuoured your selfe, to bring the same to any such ende, or any thing at all resembled therein the auncient maners. Fabritio. You are happened vpon the poynt, where I looked: for that my talke de-  
serued

serued no other question : no: I desired other : and albeit that I could saue my selfe with an easie excuse, not withstanding for my more contentation, and yours, seeing that the season beareth it, I will enter in much longer reasoning. Those men which will enteprise any thing, ought first with all diligence to prepare them selues to bee ready and apt when occasion serueth, to accomplish that, which they haue determined to worke: and for that when the preparations are made craftely, they are not knowen, there cannot be accused any man of any negligence, if first it bee not disclosed by the occasion: in the which working not, is after scene, either that there is not prepared so much as sufficeth, or that there hath not bene of any part thereof thought upon. And for as much as to me there is not come any occasion to be able to shew the preparations made of mee, to reduce the seruice of warre into his auncient orders, if I haue not reduced it, I can not be of you, no: of other blamed: I beleue this excuse should suffice for answere to your accusation. Cosimo. It should suffice, when I were certaine, that the occasion were not come. Fabritio. But for that I know, that you may doubt whether this occasion hath bene come, or no, I wil largely lye (when you with patience will heare me) discourse what preparations are necessary first to make, what occasion must grow, what difficulty doth let, that the preparations helpe not, and why the occasion can not come, & how these things at ones, which seeme contrary ends, is most difficult & most easie to do. Cos. You cannot do both to me, & unto these other, a thing more thankfull then this. And if to you it shall not be tedious to speake, unto vs it shal neuer be grieuous to heare: but forasmuch as this reasoning ought to be long, I wil with your lycence take helpe of these my friends, & they and I pray you of one thing, that is, that you will not be grieued, if some time with some question of impo-



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faunce we interrupt you . Fabritio . I am most wel contented, that you Cosimo with these other young men here, do aske me : for that I beleue, that youthfullnesse, will make you louers of warlike things, and more easie to beleue the same, that of me shalbe said. These other, by reason of hauing now their head white, and for hauing vpon their backs their blood congeled, part of the are wont to be enemies of warre , part vncorrecable, as those, whome beleue, that times, and not the naughty maners, constrayne men to liue thus : so that safely aske you all of me, and without respect : the which I desire , as well, for that it may be vnto me a little ease, as also for y I shall haue pleasure, not to leaue in your minde any doubt: I will begin at your words , where you saide vnto me, that in the warre, that is my arte, I had not indeuoured to bring it to any auncient ende : wher vpon I say, as this being an art, wherby men of no maner of age can liue honestly, it can not be bled for an art , but of a common weale: or of a Kingdome : and the one and the other of these, when they be well ordeyned , will neuer consent to any their Cetezens , or Subiectes , to vse it for any arte , nor neuer any good man doth exercise it for his perticular arte : for as much as good he shall neuer be iudged , whome maketh an exercise thereof , where purposing alwaies to gaine thereby , it is requisite for him to be rauening, deceit, full, violent , and to haue many qualities , the which of necessitie maketh him not good : nor those men can not , which vse it for an arte, as well the great as the least , bee made otherwise : for that this Arte doeth not nourish them in peace . Wherefore they are constrained , either to thinke that there is no peace, or so much to preuayle in the time of warre , that in peace they may be able to keepe them selues : and neither of these two thoughtes happeneth in a good man : for that in minding to be able to find him selfe at all times

Why a good man ought neuer to vse the exercise of armes, as his Art.

times, do grow robberies, violence, slaughters, which such Souldiours make as well to the friends, as to the enemies: and in minding not to haue peace, there groweth deceypts, which the Capitaines vse to those, which hire them, to the entent the warre may continue, and yet though the peace come often, it happeneth that the Capitaynes being depriued of their stipendes, and of their licencious liuing, they erecte an ensigne of aduentures, and without any pitie they put to sacke a Province. Haue not you in memorie of your affaires, how that being many Souldiours in Italie without wages, because the warre was ended, they assembled together many companie, and went saring the townes, and sacking the countrie, without being able to make any remedy: Haue you not read, that the Carthagenes souldiours, the first warre being ended which they had with the Romaines, vnder Matho, and Spendio, two Capitaynes, rebelliouslie constituted of them, made more perillous warre to the Carthagenes, then the same which they had ended with the Romaines: In the tyme of our fathers, Fraunces Sforza, to the entent to be able to liue honourable in the tyme of peace, not onely beguiled the Millenars, whose souldiour he was, but he tooke from them their libertie and became their Prince. Like vnto him hath bene all the other Souldiers of Italie, which haue vsed warfare, for their particular Arte, and albeit they haue not through their malignitie become Dukes of Milein, so much the more they deserued to be blamed: for that although they haue not gotten so much as he, they haue all (if their liues were seene) sought to bring the like things to passe. Sforza father of Fraunces, constrained Quene Ione, to cast her selfe into the armes of the King of Aragon, hauing in a sodaine forsaken her: and in the middelt of her enemies, left her disarmed, onely to satisfie his ambition, either in saring her, or taking from her the kingdome. Braccio with the very  
same

## The first booke of

A prouerbe of  
warre & peace

same industrie, sought to possesse the kingdome of Pa-  
ples, and if he had not bene ouerthrowen and slaine at  
Aquila, hee had brought it to passe. Like disorders grow  
not of other, then of such men as hath bene, that vse the  
exercise of warfare, for their proper arte. Haue not you  
a Prouerbe, which fortifieth my reasons, which saith,  
that warre maketh Thēues, and peace hangeth them  
by? For as much as those, which know not how  
to liue of other exercise, and in the same finding not any  
man to sustaine them, and hauing not so much power,  
to know how to reduce themselues together, to make  
an open rebellion, they are constrayned of necessitie to  
Robbe in the highe waies, and Justice is inforced to  
extinguish them. Cosimo. You haue made mee to e-  
steeme this arte of warfare almost as nothing, and I  
haue supposed it the most excellentest, and most hono-  
rablest that hath bene used: so that if you declare mee it  
not better, I can not remaine satisfied: For that when  
it is the same, that you say, I know not, whereof groweth  
the glorie of Caesar, of Pompei, of Scipio, of Mar-  
cello, and of so many Romane Capitaines, which by  
fame are celebrated as Goddes. Fabricio. I haue not  
yet made an ende of disputing all the same, that I pur-  
posed to propounde: which were two thinges, the one  
that a good manne coulde not vse this exercise for his  
Arte: the other, that a common weale or a kingdome  
well gouerned, did neuer permit, that their Subiectes,  
or Citezens should vse it for an Arte. About the first,  
I haue spoken as much as hath comen into my minde,  
there remayneth in mee to speake of the second, where  
I will come to aunswere this your laste question,  
and I saye that Pompei and Caesar, and almost all those  
Capitaines, which were at Rome, after the last Car-  
thagēens warre, gotte fame as valiaunt men, not as  
good, and those which liued before them, got glorie as  
valiaunt and good men: the which grewe, for that these  
tooke



tooke not the exercise of warre for their Arte: and those which I named first, as their arte did vse it.

And so long as the common weale liued vnspotted, neuer any Noble Citezen would presume, by the meanes of such exercise, to auayle thereby in peace, breaking the lawes, spoiling the Provinces, vsurping, and playing the Tyrant in the Countrie, and in euerie manner preuailing: nor any of how low degree so euer they were, would goe about to violate the Religion, confederating them selues with priuate men, not to feare the Senate, or to follow any Tyrannicall insolence, for to bee able to lue with Arte of warre in all times.

But those which were Capitaines, contented with triumphe, with desire did turne to their priuate life, and those which were members, would be more willing to lay away their weapons, then to take them, and euerie man turned to his science, whereby they got their liuing: for there was neuer any, that would hope with pray, and with this Arte, to be able to finde themselves. Of this there may be made concerning Citezens, most euident coniecture, by the ensample of Regolo Attillio, who being Capitaine of the Romane armies in Affrica, and hauing as it were ouercome the Carthagenens, he required of the Senate, licence to returne home, to keepe his possessions, & told them, that they were marde of his hus bandmen. Whereby it is more cleare then the Sunne, that if the same man had vsed the warre as his Arte, and by meanes thereof, had purposed to haue made it profitable vnto him, hauing in praise so many Provinces, he would not haue asked licence, to returne to keepe his felldes: for as much as euerie day he might otherwise haue gotten much more, then the value of all those possessions: but because these good men, and such as vse not the warre for their art, will not take of the same any thing then labour, perills, and glozie, when they  
are

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are sufficiently glorious , they desire to returne home and to liue of their owne science . Concerning men of lowe degree, and common souldiers , to proue that they kept the very same order , it doth appeare that euery one willingly absented them selues from such exercise, and when they serued not in warre , they would haue desired to serue , and when they did serue , they would haue desired leaue not to haue serued: which is well knowne thow many insamples , and inespially seeing how among the first priuileges , which the Romaine people gaue to their Citezens was, y they should not be constrained against their willes, to serue in the warres. Therefore, Rome so long as it was well gouerned, while it was untill the coming of Graccus, it had not any souldiour that would take this exercise for an arte, and therefore it had few naughty, and those few were severely punished . When a Citie well gouerned , ought to desire, that this study of warre , be vsed in time of peace for exercise, and in the time of warre , for necessity and for glorie: and to suffer onely the common weale to vse it for an arte, as Rome did, and what soeuer Citezen, that hath in such exercise other ende , is not good, and what soeuer Citie is gouerned other wise , is not well ordeyned. Cosimo . I remayne contented enough and satisfied of the same, which hether to you haue told, & this conclusion please me verie well which you haue made , and as much as is looked for touching a common wealth, I beleue that it is true, but concerning kings, I cannot tell now, for that I would beleue that a king would haue about him , whome particularlie should take such exercise for his arte. Fabritio . A kingdome well ordered ought most of all to auoide the like kinde of men, for onely they, are the destruction of their king, and altogether ministers of tyranny , and alledge me not to the contrary any present kingdome , for that I would denie you all those to be kingdomes well orde-  
red

red, because the kingdomes which haue god orders, giue not their absolute Empire vnto their king, sauing in the armies, for as much as in this place onely, a quicke deliberation is necessary, and for this cause a principall power ought to be made. In the other affaires, he ought not to do any thing without counsell, and those are to be feared, which counsell him, least hee haue some about him which in time of peace desireth to haue warre, because they are not able without the same to liue, but in this, I wilbe a litle more large: neither to seeke a kingdom altogether good, but like vnto those, which be now a dayes, where also of a king those ought to be feared, which take the warre for their arte, for that the strength of armes without any doubt are the sote men: so that if a king take not order in such wise, that his men in time of peace may be content to retourne home, and to liue of their owne trades, it will follow of necessitie, that he ruinate: for that there is not found more perillous men, then those, which make the warre as their arte: because in such case, a king is inforced either alwaies to make warre, or to pay them alwaies, or else to be in perill, that they take not from him his kingdom. To make warre alwaies, it is not possible: to pay them alwaies it cannot be: seeing y of necessitie, he runneth in peril to leese the state. The Romanes (as I haue saide) so long as they were wise and good, would neuer permit, that their Citezens should take this exercise for their arte, although they were able to nourish the therein alwaies, for y that alwaies they made war: but to auoid the same hurt, which this continuall exercise might do them, seeing the time did not vary, they changed the men, and from time to time tooke such order with their Legions, that in xv. yerres alwaies, they renewed them: and so they had their men in the floure of their age, that is from xvii. to xxxiii. yerres, in which time the legges, the handes, and the eyes aunf were the



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one the other, nor they tarried not till their strength should decaye, and their naughtinesse increase, as it did after in the corrupted times. For as much as Octavian first, and after Tiberius, minding moze their owne proper power, then the publicke profit, began to barme the Romane people, to be able easly to commaunde them, and to keepe continually those same armies on the frontiers of the Empire: and because also they indged those, not sufficient to keepe bydled the people and Romane Senate, they ordayned an armie called Pretoriano, which lay hard by the walles of Rome, and was as a rocke on y<sup>e</sup> backe of the same Citie. And for asmuch as then they began fræly to permit, that such men as were apointed in such exercises, should vse the seruice of warre for their arte, straight way the insolence of them grew, that they became fearefull vnto the Senate, & hurtfull to the Emperour, whereby ensued such harme, that many were slaine through their insolencie: for that they gaue and toke alway the Empire, to whome they thought good. And some while it happened, that in one selfe tyme there were many Emperours, created of diuers armies: of which thinges proceeded first the deuision of the Empire, and at last the ruine of the same. Therfore kings ought, if they will liue safely, to haue their Souldiours made of men, who when it is time to make warre, willingly for his loue will go to the same, and when the peace commeth after, moze willingly will returne home. Which alwaies wilbe, when they shalbe men that know how to liue of other arte then this: and so they ought to desire, peace being come, that their Prince do tourne to gouerne their people, the gentilmen to the tending of their possessions, and the common souldiours to their particular arte, and euerie one of these, to make warre to haue peace, and not to seeke to trouble the peace, to haue war. Cosimo: True, by this reasoning of yours. I thinke to be well considered

sidered, notwithstanding being almost contrary to that, which till now I haue thought, my minde as yet doth not rest purged of all doubt, for as much as I see many Lordes and gentlemen, to fynde themselves in time of peace, thorough the studies of warre, as your matches be, who haue prouision of their Princes, and of the comminalty. I see also, almost all the gentlemen at armes remaine with their prouision. I see many souldiers lye in garison of cities and fortresses, so that me thinkes, that there is place in time of peace, for euery one.

Fabritio. I do not beleue that you beleue this, that in time of peace euery man may haue place, because, put case that there could not be brought other reason, the small number, that all they make, which remaine in the places alledged of you, would answere you.

What proportion haue the souldiours, which are requisite to be in the warre with those, which in the peace are occuppyed? For as much as the fortresses, and the cities that be warded in the time of peace, in the warre are warded much more, vnto whom are ioyned the souldiers which keepe in the field, which are a great number, all which in the peace be put away. And concerning the garde of states, which are a small number, I hope Iuly, and you haue shewed to euery man, how much are to be feared those, who will not learne to exercise any other arte, then the warre, and you haue for their insolence, depriued them from your gard, and haue placed therein Swisers, as men bozne and brought vp vnder Lawes, and chosen of the comminalty, according to the true election: so that say no more, that in peace is place for euery man. Concerning men at armes, they all remaining in peace with their wages, maketh this resolution to seeme more difficult: notwithstanding who considereth well all, shall finde the answere easy, because this maner of keeping men of armes, is a corrupted maner and not good, the occasion is, for that they

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they be men, who make thereof an Arte, and of them there should growe euerie day a thousand inconueniences in the states, where they should bee, if they were accompanied of sufficient company: but being few, and not able by themselves to make an armie, they cannot often do such greivous hurtes, neuerthelesse they haue done oftentimes: as I haue saide of Fraunces, and of Sforza his father, and of Braccio of Perugia: so that this vse of keeping men of armes, I do not allow, for it is a corrupt maner, and it may make great inconueniences. Cosimo. Would you liue without them? or keeping them, how would you keepe them? Fabritio. By waye of ordinaunce, not like to those of the king of Fraunce: for as much as they be perillous, and insolent like vnto ours, but I would keepe them like vnto those of the ancient Romanes, whome created the chivalrye of their owne subiectes, and in peace time, they sent them home vnto their houses, to liue of their owne trades, as more largely before this reasoning ende, I shall dispute. So that if now this part of an armie, can liue in such exercise, as well whē it is peace, it groweth of the corrupt order. Concerning the prouisions, which are referred to me, & to other capitaines, I say vnto you, that this likewise is an order most corrupted: for as much as a wise common weale, ought not to giue such stipends to any, but rather they ought to vse for Capitaines in the war, their Citezens, and in time of peace to will, that they returne to their occupations. Likewise also, a wise king either ought not to giue to such, or giuing any, the occasion ought to be either for reward of some worthy dede, or else for the desire to keepe such a kinde of man, as well in peace as in warre. And because you alledged mee, I will make ensample vpon my selfe, and say that I neuer vsed the warre as an arte, for as much as my art, is to gouerne my subiects, & to defend them, and to bee able to defend them, to loue peace, and to know how to  
make



make warre, and my king not so much to reward and esteeme me, for my knowledge in the warre, as for the knowledge that I haue to counsel him in peace. Then a king ought not to desire to haue about him, any that is not of this condition if hee bee wise, and prudently minde to gouerne: for that, that if he shall haue aboute him either to much louers of peace, or to much louers of warre, they shall make him to erre, I can not in this my first reasoning, and according to my purpose saye more, and when this sufficeth you not, it is mate, you seeke of them that may satisfie you better. You may now very well vnderstand, how difficulte it is to bring in vnto the auncient maners in the present warres, & what preparations are mate for a wise man to make, & what occasions ought to be looked for, to be able to execute it. But by and by, you shall knowe these thinges better, if this reasoning make you not weery, conferring what so euer partes of the auncient orders hath bene, to the maners now present. Cosimo. If we desired at the first to heare your reason of these thinges, truelie the same which hetherto you haue spoken, hath doubled our desire: wherefore wee thanke you for that wee haue heard, & the rest, we craue of you to hear. Fab. Seeing that it is so your pleasure, I will begin to intreat of this matter from the beginning, to the intent it may bee better vnderstood, being able by the same meane, more largely to declare it. The ende of him that will make warre, is to be able to fight with euery enemy in the field, & to be able to ouercome an armie. To purpose to do this, it is conuenient to ordeyne an host. To ordeyne an host, there must be found men, armed, ordered, & as well in the small, as in the great orders exercised, to knowe how to keepe aray, and to incampe, so that after bringing them vnto the enemy, either standing or marching, they may know how to behaue them selues valiantly. In this thing consisteth all the industrie of the

A King y<sup>e</sup> hath about him any y<sup>e</sup> are to much louers of war, or to much louers of peace, shal cause him to erre.

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Out of what  
countrie is best  
to chuse soldi-  
ours to make  
a good electi-  
on.

warre on the lande, which is the most necessary, and the most honorablest, for he that can well order a field against the enemy, the other faultes y he should make in the affairs of warre, wilbe borne with, but he that lacketh this knowledge, although that in other particulars he be very good: he shal neuer bring a warre to honour: forasmuch as a field that thou winnest, doth cancell all other thy euil actes: so likewise losyng it, all things well done of thee before, remaine vayne. Therefore, being necessary first to fynde the men, it is requisite to come to the choise of them. They which vnto the warre haue giuen rule, will that the men be chosen out of temperate countries, to the intent they may haue hardinesse, and prudence, for as much as the hot countrie, breeds prudent men & not hardy, the colde, hardy and not prudent. This rule is good to be giuen, to one that were Prince of all the world, because it is lawfull for him to chuse men out of those places, which he shal thinke best. But minding to giue a rule, that euery one may vse, it is meete to declare, that euery common weale, and euery kingdome, ought to chuse their souldiours out of their owne countrie, whether it be hot, cold, or temperate: for that it is seene by olde ensamples, how that in euery countrie with exercise, ther is made good souldiours: because where nature lacketh, the industrie supplieth, the which in this case is worth more, then nature, and taking them in other places, you shal not haue of the choise, for choise is as much to say, as the best of a prouince, and to haue power to chuse those that wil not, as well as those that wil serue. Wherefore you must take your choise in those places, that are subiect vnto you, for that you cannot take whom you list, in the countries that are not yours, but you must take such as wil go with you.

Cosimo. Yet there may be of those that will come, taken and left, and therefore, they may be called chosen.

Fabri-

Fabritio. You say the trueth in a certaine maner, but consider the faultes which such a chosen man hath in himselfe, for that also many times it happeneth, that he is not a chosen man. For those y are not thy subiects and which willingly do serue, are not of the best, but rather of the worst of a Prouince, forasmuch as if any be sclanderous, idle, unruly, without Religion, fugitiue from the rule of their fathers, blasphemous, Displayers, in euery condition euill brought vp, bee those, which wil serue, whose customes cannot be more contrary, to a true and good seruice: Albeit, when there be offered vnto you, so many of such men, as come to aboute the number, that you haue appoynted, you may chuse them: but the matter being naught, the choise is not possible to bee good: also many times it chaunceth, that they be not so many, as will make vp the number, whereof you haue neede, so that being constrained to take them all, it commeth to passe, that they cannot then be called chosen men, but hyred Souldiours. With this disorder the armies of Italy, are made nowe a dayes, and in other places, excepte in Almayne, because there they do not hire any by commaundement of the Prince, but according to the wil of them, that are disposed to serue. Then consider now, what maners of those auncient armies, may be brought into an armie of me, put together by lyke waies. Cosimo. What way ought to be vsed then? Fabritio. The same way that I said, to chuse them of their owne subiects, and with the authority of the Prince. Cosimo. In the chosen, shall there be likewise brought in any auncient fashions? Fabritio. You know well enough that ye: when he that should commaund them, were their Prince, or ordinary lord, whether he were made chiefe, or as a Citizen, & for the same time Capitaine, being a common weale, otherwise it is hard to make any thing good.

Cosimo. Why? Fabritio. I wil tel you a none: For this



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Whether it be  
better to take  
menne out of  
townes or out  
of the country  
to serue.

this time I will that this suffice you, that it can not be wrought wel by other way. Cosimo. Having then to make this choise of men in their owne countries, whether iudge you that it be better to take them out of the citie, or out of the countrie. Fabritio. Those that haue written of such matters, do al agree, that it is best to chuse them out of the countrie, being men accustomed to no ease, nourished in labours, vsed to stand in the Sunne, to sie the shadow, knowing how to occupy the spade, to make a ditch, to carry a burthen, and to be without any deceit, and without maliciousnes. But in this part of my opinion should be, that being two sortes of Soldiours, on foot, and on horsebacke, that those on foote, should be chosen out of the countrie, and those on horsebacke, out of the cities. Cosi. Of what age would you chouse them? Fab. I would take them, when I had to make a new armie, from xvii. to xl. yeares: when it were made already, and I had to restore them, of xvii. alwaies. Cosimo. I do not vnderstand well this distinction. Fabritio. I shall tell you: when I should ordeine an host to make warre, where were no host already, it should be necessary to chuse all those men, which were most fit and apt for the warre, so that they were of seruible age, that I might be able to instruct them, as by mee shalbe declared: but when I would make my choise of men in places, where a power were already prepared for supplying of the same, I would take them of xvii. yerres: for as much as the other of more age, be already chosen and appointed. Cosimo. Then would you prepare a power like to those which is in our countrie? Fabri. Yea truly, it is so that I would arme them, Capitaine them, exercise and order them in a manner, which I cannot tell, if you haue ordered them so. Cosimo. Then do you praise the keeping of order?

Fabritio. Wherefore would you that I should dispraise it? Cosimo. Because many wise men haue alwaies

waies blamed it.

Fabritio. You speake against all reason to say that a wise man blameth order, he may be well thought wise, and be nothing so.

Cosimo. The naughtie proofe which it hath allwaies, maketh vs to haue such opinion thereof.

Fabritio. Take heede it be not your fault, and not the keeping of order, the which you shal know, before this reasoning be ended.

Cosimo. You shal do a thing most thankfull, yet I will say concerning the same, that they accuse it, to the entent you may the better iustify it. They say thus, either it is vnprofitable, and we trusting on the same, shall make vs to lose our state, or it shall be vertuous, and by the same meane, he that gouerneth may easily depriue vs thereof. They alledge the Romanes, who by meane of their owne powers, lost their liberty. They alledge the Venecians and the French king, which Venecians, because they will not be constrayned, to obey one of their owne Citizens, vse the power of straungers: and the French king hath disarmed his people, to be able more easily to commaund them, but they which like not the ordinaunces, feare much more the vnprofitableness, that they suppose may insue thereby, then any thing else: the one cause which they alledge is, because they are vnerpert: the other, for that they haue to serue perforce: for asmuch as they say, that the aged be not so disciplinable, nor apt to learne the seate of armes, and that by force, is done neuer any thing good.

Fabritio. All these reasons that you haue rehearsed, be of men which knoweth the thing full little, as I shall plainly declare. And first concerning the vnprofitableness, I tell you, that there is no service vsed in any countrie more profitable, then the service by the subiectes of the same, nor the same service cannot be prepared, but in this manner: and for that this nee-

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## The first Booke of

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ours be made  
bold & expert.

deth not to be disputed of, I wil not lose much time: be-  
cause all the ensamples of auncient histories, make for  
my purpose, and for that they alledge the lacke of expe-  
rience, and to vse constraint: I say how it is true, that  
the lacke of experience, causeth lacke of courage, & con-  
straint, maketh euill contention: but courage, and ex-  
perience they are made to get, with the maner of ar-  
ming them, exercising and ordering them, as in proce-  
ding of this reasoning, you shall heare. But concerning  
constraint, you ought to vnderstand, y the men which  
are conducted to warfare, by commaundement of their  
Prince, they ought to come, neither altogether forced,  
nor altogether willingly, for as much as too much wil-  
lingnesse would make the inconueniences, where I  
told afoze, that he should not be a chosen man, & those  
would be few that would goe: and so too much con-  
straint will bring forth naughty effectes. Therefore,  
a meane ought to be taken, where is not all constraint,  
nor all willingnesse: but being drawen of a respect,  
that they haue towards their Prince, where they feare  
more the displeasure of the same, then the present paine,  
and alwayes it shall happen to be a constraint, in ma-  
ner mingled with willingnesse, that there cannot grow  
such euill contentation, that it make euill effectes. Yet  
I say not for all this, that it cannot be overcome, for  
that full many times, were overcome the Romane ar-  
mies, and the army of Anibal was overcome, so that  
it is seene, that an armie cannot be ordained so sure,  
that it cannot be ouerthrowen. Therefore, these your  
wise men ought not to measure this vnprofitablenesse,  
for hauing lost once, but to beleue, that lyke as they  
leese, so they may winne, and remedie the occasion of  
the losse: and when they shall seeke this, they shall finde,  
that it hath not bene through fault of the way, but of  
the order, which had not his perfection, and as I haue  
said, they ought to prouide, not with blaming the or-  
der



der, but with redressing it, the which how it ought to be done, you shall vnderstand, from point to point. Concerning the doubt, least such ordinaunces, take not from thee thy state, by meane of one, which is made head thereof, I aunſwere, that the armure on the backs of Citizens, or subiectes, giuen by the disposition of order and law, dyd neuer harme, but rather alwaies it doth good, and maintaineth the Citie, much longer in suretye through helpe of this armure, then without. Rome continued free CCC. yeeres, and was armed. Sparta viii. C. Many other Cities haue bene disarmed, & haue remained free, lesse then xl. For as much as cities haue neede of defence, and when they haue no defence of their owne, they hire straungers, and the straungers defence, shall hurt much sooner the common weale, then their owne: because they be much easier to be corrupted, and a Citizen that becommeth mightie, may much sooner vsurpe, & more easely bring his purpose to passe, where the people be disarmed, that he seeketh to oppresse, besides this, a Citie ought to feare a great deale more, two enemies then one. The same Citie that vseth straungers power, feareth at one instant the straunger, which it hireth, and the Citizen: and whether this feare ought to be, remember the same, which I rehearsed a litle agoe of Frances Sforza. That Citie, which vseth her owne proper power, feareth no man, other then onely her owne Citizen. But for all the reasons that may be said, this shall serue mee, that neuer any ordeyned any common weale, or Kingdome, y would not thinke, that they themselves, that inhabite the same, should with their swordes defend it.

And if the Venicians had bene so wise in this, as in all their other orders, they should haue made a new Monarchie in the world, whom so much the more deserue blame, hauing bene armed of their first giuer of lawes: for hauing no dominion on the land, they were

D.ii.

armed

A Citie that vseth the seruice of straungers, feareth at one instant the straunger which it hireth, & the Citizens of the same.

## The first Booke of

armed on the sea, where they made their warre vertuously, and with weapons in their handes, increased their countrie. But when they were driven, to make warre on the land, to defend Vicenza, where they ought to haue sent one of their Citezens, to haue fought on the land, they hired for their Capitaine, the Marques of Mantua: this was the same foolish acte, which cut of their legges, from climbing into heauen, and from enlarging their dominion: and if they did it, because they beleued, that as they knew, how to make warre on the sea, so they mistrusted themselves, to make it on the land, it was a mistrust not wise: for as much as more easely, a Capitaine of the sea, which is vsed to fight with the windes, with the water, & with men, shall become a Capitaine of the land, where he shall fight with men onely, then a Capitaine of the land, to become a Capitaine of the sea. The Romanes knowing how to fight on the land, and on the sea, comming to warre, with the Carthaginens, which were mightie on the sea, hired not Greekes, or Spaniardes, accustomed to the Sea, but they committed the same care, to their Citizens, which they set on land, and they ouercame. If they did it, for that one of their Citezens should not become a tirant, it was a feare finally considered: for that besides the same reasons, which to this purpose, a litle afoze I haue rehearsed, if a Citezen with the powers on the sea, was neuer made a tirant in a Citie standing in the sea, so much the lesse he should haue bene able to accomplish this with the powers of this land: whereby they ought to see that the weapons in the handes of their Citezens could not make tirauntes, but the naughtie orders of the gouernement, which maketh tirannie in a Citie, and they hauing good gouernement, they neede not to feare their owne weapons: they take therefore an vnwise waie, the which hath bene occasion to take from them much glozie, and much felicitie. Concerning the  
errour

errour which the King of Fraunce committeth, not keeping instructed his people in the warre, the which those your wise men alledge for ensample, there is no man, (his perticuler passions laide a side) that doth not iudge this fault to be in the same kingdome, and this negligence onely to make him weake. But I haue made to great a digression, and peradventure am come out of my purpose, albeit, I haue made it to auns were you, and to shew you that in no countrie, there can be made sure foundation, for defence in other powers, but of their owne subiectes: and their owne power cannot bee prepared otherwise, then by way of an ordinance, nor by other way to induce the fashion of an armie in any place, nor by other meane to ordaine an instruction of warrefare. If you haue read the orders, which those first kinges made in Rome, and inesppecially Seruio Tullo, you shall finde that the orders of the Clasi is no other, then an ordinance, to be able at a sodaine, to bring together an armie, for defence of y<sup>e</sup> Citie. But let vs retorne to our choise, I saye againe, that hauing to renewe an olde order, I would take them of .xvii. hauing to make a new army, I would take them of all ages, betweene .xvii. and .xl. to be able to warre straight way.

Cosimo. Would you make any difference, of what science you would chuse them?

Fabritio. The authours, which haue written of the arte of warre, make difference, for that they will not, that there bee taken foulders, fishers, Cokes, Builders, nor none that vse any science of voluptuousnesse. But they will, that there bee taken Plowmen, Farmers, Smithes, Carpenters, Butchers, Hunters, and such like: but I would make litle difference, through coniecture of the conscience, concerning the goodnesse of the man, notwithstanding, in as much as to be able with moze profite to vse them, I would make difference, and for this cause, the cuntrie men, which are

Of what science soldiers ought to be chosen.



## The first booke of

used to till the ground, are more profitable then any other. Next to whom be Smithes, Carpenters, Ferrars, Masons, whereof it is profitable to haue enough: for that their occupations, serue well in many thinges: being a thing very good to haue a souldiour, of whom may be had double seruice.

Cosimo. Whereby do they know those, that be, or are not sufficient to serue.

Fabritio. I will speake of the manner of chusing a new ordinaunce, to make an armie after, for that, part of this matter, doth come also to be reasoned of, in the election, which should be made for y replenishing, or restoring of an olde ordinaunce. I say therefore, that the godnesse of one, which thou must chuse for a Souldiour, is known either by experice, through meane of some of his workes, thy doinges, or by coniecture. The proofe of vertue, cannot be found in men which are chosen of newe, and which neuer afore haue bene chosen, and of these are found either few or none, in the ordinaunce that of new is ordeyned. It is necessary therefore, lacking this experience, to runne to the coniecture, which is taken by the yeeres, by the occupation, and by the personage: of those two first, hath bene reasoned, there remaineth to speake of the third. And therefore, I saye how some haue willed, that the souldiour be great, amongst whom was Pirrus. Some other haue chosen them onely, by the lustinesse of the body, as Caesar did: which lustinesse of body and minde, is coniectured by the composition of the members, and of the grace of the countenance: therefore, these that write saye, that they would haue the eyes liuely and cherefull, the necke full of sinowes, the breast large, the armes full of muscles, the fingers long, litle belly, the flankes round, the legges and feete dry: which partes are wont alwaies to make a man nimble and strong, which are two thinges, that in a souldiour are sought aboute all other.

How to chuse  
a Souldiour.

other. Regarde ought to be had aboue all things, to his customes, and that in him be honesty and shame: otherwise, there shal be chosen an instrument of mischief, and a beginning of corruption: for that let no man beleue that in the dishonest education, and filthy mynde, there may take any vertue, which is in any part laudable. And I thinke it not superfluous, but rather I beleue it to be necessary, to the entent you may the better vnderstand, the importaunce of this chosen, to tell you the maner, that the Romane Consuls, in the beginning of their rule, obserued in the chosing of their Romane legions: in the which choise of men, because the same legions were mingled with olde soldiours, and new, considering the continuall warre they kept, they might in their choise procede, with the experience of the old, and with the coniecture of the new, and this ought to be noted, that these men be chosen, either to serue incontinently, or to exercise them incontinently, and after to serue when neede should require. But my intention is to shew you, how an army may be prepared in the countrie, where there is warlike discipline: in which countrie, chosen men can not be had, to vse the straight way, but there, where the custome is to leaue armies, and by meane of the Prince, they may then well be had, as the Romanes obserued, and as is obserued at this day among the Swis: because in these chosen, though there be many new men, there bee also so many of the other olde soldiours, accustomed to serue in the warlike orders, where the newe mingled together with the olde, make a body vnited and good, notwithstanding, that the Emperours after, beginning the stacions of ordinary soldiours, had appoynted ouer the newe soldiours, which were called Tironi, a maister to exercise them, as appeareth in the life of Massimo the Emperour. The which thinge, while Rome was free, not onely in the armies, but in the  
citie

## *The first booke of*

citie was ordeined: and the exercises of warre, being accustomed in the same, where the young men did exercise, they grew, that being chosen after to go into war, they wer so vsed in the sayned exercise of warfare, that they could easily worke in the true: But those Emperours hauing after put downe these exercises, they were constrained to vse the waies, that I haue shewed you. Therefore, comming to the maner of the chosen Romane, I say that after the Romane Consulles (to whom was appoynted the charge of the warre) had taken the rule, minding to ordeine their armies, for that it was the custome, that either of them should haue two Legions of Romane men, which was the strength of their armies, they created xiiii. Tribunes of warre, and they appointed sixe for euery Legion, whom did the same office, which those do now a dayes, that we call Conestables: they made after to come together, all the Romane men apt to beare weapons, and they put the Tribunes of euery Legion, seperate the one from the other. Afterward, by lot they drew the Tribes, of which they had first to make the chosen, and of the same Tribe they chose foure of the best, of which was chosen one of the Tribunes, of the first Legion, and of the other three was chosen, one of the Tribunes of the second legion, of the other two there was chosen one of the tribunes of y<sup>e</sup> third, & the same last fell to the fourth Legion. After these iiii. they chose other foure, of which, first one was chosen of the tribunes of the second legion, the second of those of the third, the third of those of the fourth, the fourth remained to the first. After, they chose other iiii. the first chose y<sup>e</sup> third, the second the fourth, the third the fifth, the fourth remainned to the second: and thus they varied successinely, this maner of choosing, so that the election came to bee equall, and the Legions were gathered together: and as afoze we sayd, this choise might be made to vse straight way



way, for that they made them of men, of whom a good part were experienced in the very warfare in deede, & all in the fained exercised; and they might make this choise by coniecture, and by experience. But where a power must be ordeyned of new, and for this to chuse them out of hand; this chosen cannot be made; sauing by coniecture, which is taken by considering their ages and their likelnesse.

Cosimo. I heloue all to be true, as much as of you hath bene spoken: but before that you proceede to other reasoning, I would aske you one thing, which you haue made me to remember: saying that the choosing, that is to be made where men were not vsed to warre, ought to be made by coniecture: for asmuch as I haue heard some menne, in many places dispraise our ordinance, and inespacially concerning the number, for that many say, that there ought to be taken lesse number, wherof is gotten this profit, that they shall be better and better chosen, and men shall not be so much diseased, so that there may be giuen the some rewarde, wher by they may be more contented, and better be commaunded, whereof I would vnderstand in this part your opinion, and whether you loue better the great number, then the litle, & what way you would take to chuse them in the one, and in the other number.

Fabritio. Without doubt it is better, and more necessary, the great number, then the litle: but to speake more plainly, where there cannot be ordeyned a great number of men, there can not be ordeyned a perfect ordinance: and I will easely confute all the reasons of them propounded. I say therefore first, that the lesse number where is many people, as is for ensample Tuscane, maketh not that you haue better, nor that the chosen be more excellent, for that minding in choosing the men, to iudge them by experience, there shall be found in the same countrie most few, whom expe-

C.i.

rience

## The first Booke of

rience should make yecurable, both for that felue hath  
beene in warre, as also for that of those, most felue haue  
made triall, whereby they might deserue to bee chosen  
before the other: so that he which ought in like places to  
chuse, it is mete he leaue aparte the experience, and  
take them by coniecture. When being brought likewise  
into such necessitie, I would understand, if there come  
before mee twentie young menne of good stature, with  
what rule I ought to take, or to leaue any: wherewith-  
out doubt, I beleue that euerie man will confesse, how  
it is lesse err our to take them al, to arme them and exer-  
cise them, being not able to know, which of them is  
best, and to reserue to make after more certaine chosen,  
when in practising them with exercise, there shall bee  
knownen those of most spirite, and of most life: which  
considered, the chusing in this case a felue, to haue them  
better, is altogether naught.

Concerning diseasing lesse the countrie, and men, I  
say that the ordinaunce, either euill or litle that it bee,  
causeth not any disease, so: that this order doth not take  
men from any of their busines, it bindeth them not, that  
they can not go to do any of their affayres: for that it bin-  
deth them onely in the idle dayes, to assemble together,  
to exercise the, the which thing doth no hurt, neither to  
the countrie, nor to the men, but rather to young men, it  
shall bring delight: For that where vylge on the holye  
daie, they stand idle in tippling houses, they will goe for  
pleasure to those exercises, so: that the handling of wea-  
pons, as it is a goodly spectacle, so vnto young men it is  
pleasaunt. Concerning to be able to pay the lesse num-  
ber, and so: this to keepe them more obedient, and more  
contented, I answere, how there cannot be made an or-  
dinaunce of so few, which may be in maner continual-  
ly payed, where the same paiement of theirs may satisfie  
them. As for ensample, if ther were ordeyned a power of  
v. thousand men, for to pay them after such sort, that  
it

it might be thought sufficient, to content them; it shall be convenient to geue them at least; tenne thousande crownes the moneth: first, this number of men are not able to make an armie, this paye is intollerable to a state, and of the other side; it is not sufficient to keepe men contented, & bound to be able to serue at all times: so that in doing this, there shall be spent much, and a small power kept, which shall not be sufficient to defende thee, or to do any enterprise of thine. If thou shouldst giue them more, or shouldst take more, so much more impossibilitie it should be; for thee to pay them: if thou shouldst giue them lesse, or should take lesse, so much the lesse contentation should be in the, or so much the lesse profite they shall bring thee. Therefore those that reason of making an ordinance, & whylest they tarry at home to pay them, the reason of a thing either impossible, or vnpromisable, but it is necessary to pay them when they are taken up to be lead to the warre: albeit though such order should somewhat decrease those, in time of peace, that are appointed in the same, which I see not how, there is for recompence all those benefits, which a power brings, that is ordered in a countrey: for that without the same, there is nothing sure. I conclude, that he that will haue the little number, to be able to pay them, or for any of the other causes alledged of you, doth not vnderstand, so that also it maketh for my opinion, that euery number shall diminish in thy hands, through infinite impediments which men haue: so that the little number shall tourne to nothing: againe hauing the ordinance great, thou maiest at thy pleasure vse few of many, besides this; it must serue thee in deede, and in reputation, and alwaies the great number shall giue thee most reputation. Moreover, making the ordinance to keepe men exercised, if thou appoint a few number of men in many Countreies, the bandes of men be so farre a sunder, the one from



# The first Booke of

The other, that thou canst not without their most grievous losse, gather them together to exercise them, and without this exercise, the ordinance is unprofitable, as hereafter shall be declared.

Cosimo. It suffiseth upon this my demaunde, that which you haue sayd, but I desire now, that you declare me another doubt. They say, that such a multitude of armed men, wil make confusion, discention, and disorder in the countrie where they are.

Fabritio. This is an other vaine opinion, the cause wherof, I shal tell you: such as are ordeined to serue in the warres, may cause disorder in two maners, either betwene themselves, or against other, which thinges most easily may be withscope, where the order of it selfe should not withstand it: for that concerning the discord among themselves, this order taketh it away, and doth not nourish it, for that in ordering them, you give them armour and Capitaines. If the countrie where you ordeine them, be so vnapt for the warre, that there are not armours among the men of the same, and that they be so vnited, that they haue no heads, this order maketh them much fearser against y<sup>e</sup> straunger, but it maketh them not any thing y<sup>e</sup> more disunited, for that men wel ordered, feare the law being armed, as well as vnarmed, nor they can neuer alter, if the Capitains which you give them, cause not the alteration, and the way to make this, shall be told now: but if the countrie where you ordeine them, be warlike and disunited, this order onely shalbe occasion to vnite them, because this order giueth them armours profitable for y<sup>e</sup> warre, and heads, ertinguishers of discention: where their owne armours be unprofitable for the warres, & their heads nourishers of discord. For that so soone as any in the same countrie is offended, he resorteth by and by to his Capitaine to make complaint, who for to maintaine his reputation, comforteth him to reuengement,

not

not to peace. To the contrary both the publike heade, so that by this meanes, the occasion of discorde is taken away, and the occasion of vniion is prepared, & the provinces vnited and effeminated, get vtility, and main-  
taine vniion: the disunited and discentious do agree, & the same their fearefulnesse, which is wont disorderly to worke, is touned into publike vtility. To mynde to haue them, to do no hurt against other, it ought to be considered, that they cannot do this, except by meane of the heads which gouerne them. To will that the heads make no disorder, it is necessary to haue care, that they get not ouer them too much authorizty. And you must consider that this authorizty, is gotten either by nature, or by accident: & as to nature, it behoueth to provide, that he which is borne in one place, be not appointed to the men billed in the same, but be made head of those places, where he hath not any naturall acquaintance: and as to the accident, the thing ought to be ordeined in such maner, that euery yeare the heades may be chaunged from gouernement to gouernement: for as much as the continuall authorizty ouer one sort of men, breedeth among them so much vniion, that it may tourne easily to the preiudice of the Prince: which permutacions how profitable they be to those who haue vsed them, and hurtful to them that haue not obserued them, it is wel knowen by the kingdome of the Asirians, and by the Empire of the Romanes, where is seene, that the same kingdome indured a thousand yeares without tumult, and without any ciuill warre: which proceeded not of other, then of the permutations, which from place to place euery yeare the same Capitaynes made, vnto whom were appointed the charge of the Armies. For for any other occasion in the Romane Empire, after the blood of Caesar was extinguished, there grew so many ciuill warres, betwene the Capitaines of the hostes, and so many conspiracies of the

How to provide against such inconueniences as soldiers may cause.

The occasion of ciuill warre among y<sup>e</sup> Romanes.

## The first Booke of

foresaid capitaines against the Emperours, but onely  
for keeping continually still those capitaines alwayes  
in one gouvernement. And if in some of those first Em-  
perours, and of those after, whom held the Emperre  
with reputation, as Adriane, Marcus, Seuerus, and such  
like, there had bene so much foresight, that they had  
brought this custome of chaunging the Capitaines in  
the same Empire, without doubt it should haue made  
them more quiet; and more durable: For that the Ca-  
pitains should haue had lesse occasion to make tumults;  
the Emperour lesse cause to feare, and the Senate in  
the lackes of the successions, should haue had in the re-  
lection of the Emperour, more authoritie and by conse-  
quence should haue bin better; but the naughty custome  
either for ignorance, or through the little diligence of  
men, neither for the wicked, nor good ensamples, can be  
taken away.

Cosimo. I cannot tell, if with my questioning, I haue  
as it were lead you out of order, because from the chu-  
sing of men, we be entered into an other matter, and  
if I had not bene a little before excused, I should thinke  
to deserue some reprehension.

Fabritio. Let not this disquiet you, for that all this  
reasoning was necessarie, minding to reason of the or-  
dinawice, the which being blamed of many, it was re-  
quisite to excuse it, willing to haue this first part of chu-  
sing men to be allowed. But now before I descend to  
the other partes, I will reason of the choise of men on  
horsebacke. Of the antiquity, these were made of the  
most richest, hauing regarde both to the yeeres, and to  
the quality of the man: and they chose 300, for a legion,  
so that the Romane horse in euery Consulles armie,  
passed not the number of 600. Cosimo. Would you  
make an ordinance of horse, to exercise them at home,  
and to vse their seruice when neede requires?

Fabritio. It is most necessary, and it cannot be done  
other

The numb. of  
Horsemen that  
the Romanes  
chose for a Le-  
gion, and for a  
Consulles ar-  
mie.



otherwise, minding to haue power, that it be the owne  
prozer, and not to purpose to take of those, which make  
theredof an arte.

Cosimo. How would you chuse them?

Fabritio. I would imitate the Romanes, I would  
take of the richest, I would giue them heads or chiefe  
Capitains, in the same maner, as now a dayes to  
ther is giuen, and I would arme them & exercise them.

The choosng  
and ordering  
of Horsemen,  
that is to be  
observed at  
this present.

Cosimo. To these should it be well to giue some pro-  
uision:

Fabritio. Dea marie, but so much onely as is necessa-  
rye to keepe the horse, for as much as bringing to thy  
subiectes expences, they might iustly complayne of thee,  
therefore it should be necessary, to pay them their  
charges of their horse.

Cosimo. What number would you make: and how  
would you arme them?

Fabritio. You passe into an other matter. I will  
tell you in conuenient place, which shalbe

when I haue told you how footemen

ought to be armed, and how

a power of men is pre-

pared, for a day

of battaile.

(.)



## The second booke of the arte of warre,

of Nicholas Machiauel, Citezen and Secretarie

of Florence, vnto Laurence

Philipp Strozze.



Belieue that it is necessarie, men being found, to arme them, and minding to doe this, I suppose that it is a needefull thing to examine, what armour the antiquitie vled, and of the same to chuse the best. The Romanes deuided their sorte menne in heauie and lighte armed :

How the Romanes armed their Soldiers, & what weapons they vled

Those that were light armed, they called by the name of Veliti : Under this name were vnderstood all those that threw with Slinges, shot with Crossebowes, cast Dartes, and they vled the most part of them for their defence, to weare on their head a Murion, with a Targaet on their arme : they fought out of the orders, and farre of from the heauie armed, which did weare a head peece, that came down to their shoulders, a Corselet, which with the tases came downe to the knees, and they had the legges and armes, couered with greaues, and vambraces, with a targaet on the left arme, a yard and a halfe long, & three quarters of a yard brod, which had a hoope of Iron vpon it, to be able to sustaine a blow, and an other vnder, to the intent, that it being dymen to the earth, it should not breake : for to offend, they had girt on their left flanke a sword, the length of a yeard and a naile, on their right side, a Dagger : they had a darte in euery one of their handes, the which they called Pilo, and in the beginning of the fight, they threw those at the enimie. This was the ordering,  
and

and importaunce of the armour of the Romanes, by the which they possessed all  $\frac{1}{2}$  world. And although some of these auncient writers gaue them, besides the foresayd weapons, a staffe in their hand like vnto a Partasen, I cannot tell how a heauie staffe, may of him that holdeth a Targaet be occupied: for  $\frac{1}{2}$  to handle it with both hands, the Targaet should be an impediment, and to occupy the same with one hand, there can be done no good therewith, by reason of the weightinesse thereof: besides this, to fight in the strong, & in the orders with such long kinde of weapon, it is vnprofitable, except in the first front, where they haue space enough, to thrust out all the staffe, which in the orders within, cannot be done, for that the nature of the battaile (as in the order of the same, I shall tell you) is continually to throng together, which although it be an inconuenience, yet in so doing they feare lesse, then to stand wide, where the perill is most euident, so that all the weapons which passe in length a yarde & a halfe, in the throng, be vnprofitable: for that, if a man haue the Partasen, and will occupy it with both handes, put case that the Targaet let him not, he can not hurte with the same an enemy, whome is vpon him, if he take it with one hand, to the intent to occupie also the Targaet, being not able to take it, but in the middell, there remaineth so much of the staffe behind, that those which are behind him, shall let him to weld it. And whether it were true, either that the Romanes had not this Partasen, or that hauing it, did litle good withal, read all the battailes, in the history thereof, celebrated of Titus Liuius, and you shall see in the same, most seldome times made mencion of Partasens, but rather alwaies he saith, that the Dartes being throwen, they layed their hands on their swordes. Therefore I will leane this staffe, and obserue, concerning the Romanes, the sword for to hurte, and for defence the Targaet, with the other armour aforesaide.



## The second Booke of

How the Grekes  
did arme the  
selues, & what  
weapons they  
vsed against  
their enimies.

The Greekes dyd not arme them selues so heavily, for their defence, as the Romanes did: but for to offend the enimies, they grounded more on their stauers, then on their swordes, and in especially the Fallangye of Macedonia, which vsed stauers, that they called Sarisse, seven yardes and a halfe long, with the which they opened the ranks of their enimies, and they kept the orders in their Fallangy. And although some writers say, that they had also the Targaet, I can not tell ( by the reasons aforesayde ) how the Sarisse and they could stand together. Besides this, in the battaile that Paulus Emilius made, with Persa king of Macedonia, I doe not remember, that there is made any mention of Targaettes, but onely of the Sarisse, and of the difficultie that the Romanes armie had, to overcome them: so that I comiect that a Macedonickall Fallange, was no other wise, then now a daies a battaile of Suzzers, by which in the Turkes haue all their force, and all their power.

A braue and a  
terrible thing  
to the enimies

The Romanes did garnish ( besides the armour ) the footemen with feathers: the which thinges makes the sight of an armie of the friends goodly, to the enimies terrible. The armour of the horsemen, in the same first Romane antiquitie, was a round Targaet, and they had their head armed, and the rest vnarmed: They had a sword and a stasse, with an Iron head onely before, long and small: whereby it happened, that they were not able to stay the Targaet, and the stasse in the incountring broke, and they through being vnarmed, were subiecte to hurtes: after, in processe of time, they armed them as the footemen, albeit they vsed the Targaet much shorter, square, and the stasse more stiffe, and with two handes, to the entent, that breaking one of the heades, they might preualie with the other. With these armour as well on foote, as on horsebacke, the Romanes conquered all the world, and it is to be beleued, by the fruit thereof, which is

How the Ro-  
manes armed  
their Horse-  
men in olde  
time.

seene

same, that they were the best appointed armies, that  
 ever were: and Titus Livius in his history, doth testifie  
 very often, where coming to comparison with the  
 enemies armies, he sayeth: But the Romanes, by ver-  
 tue, by the kinde of their armours, and practise in the  
 service of warre, were superiours: and therfore I haue  
 more particularly reasoned of the armours of conquer-  
 rours, then of the conquered. But now mee thinkes  
 good, to reason onely of the maner of arming men at  
 this present. Footmen haue for their defence, a breast-  
 plate, and for to offend, a lance, six yardes and three  
 quarters long, which is called a pike, with a sword on  
 their side, rather round at the point, then sharpe. This  
 is the ordinary arming of footmen now a dayes, for  
 that few there be which haue their legges armed, and  
 their armes, the head none, and those fewe, beare in  
 steede of a Pike, a Halberde, the staffe wherof as you  
 know, is two yards and a quarter long, and it hath the  
 Iron made like an axe. Betwene them, they haue War-  
 rebuffers, the which with the violence of the fire, do the  
 same office, which in olde tyme the slingers did, and the  
 Crossebowshooters. This maner of arming was found  
 out by the Dutchmen, inespically of Swizzers, whom  
 being poore, and desirous to live free, they were, and be-  
 constrained to fight, with the ambition of the Princes  
 of Almanie, who being riche, were able to keepe horse,  
 the which the same people could not do for pouerty.  
 Whereby it grew, that being on foote, mynding to de-  
 fende themselves from the enemies, that were on horse-  
 backe, it behoueth them to seeke of the auncient orders,  
 and to sende weapons, which from the fury of hor-  
 ses should defende them: This necessity hath made  
 either to be maintained, or to be found of them the  
 auncient orders, without which, as every pru-  
 dent man affirmeth, the footemen is altogether un-  
 profitable. Therefore, they tooke for their weapon the

The maner  
 of arming me  
 now a dayes,

The inuention  
 of Pikes,

## The second Booke of

pike, a most profitable weapon, not onely to withstand  
horses, but to overcome them : and the Dutchmen haue  
by vertue of these weapons, and of these orders, taken  
such boldnes, that xv. or xx. thousande of them, wil as-  
sault the greatest number of horse that may be: and of  
this, there hath bene experience enough within this  
xv. yeares. And the insamples of their vertue hath bene  
so mightie grounded vpon these weapons, and these or-  
ders, that since King Charles passed into Italie, euery  
nation hath imitated them : so that the Spanish ar-  
mies are become into most great reputation.

Cosimo. Which maner of arming do you praise  
most, either these Dutchmens, or the auncient Ro-  
manes?

Whether the  
Romanes ma-  
ner in arming  
of men, be bet-  
ter then y<sup>e</sup> ar-  
ming of men  
that is vsed  
now a daies.

Fabritio. The Romane without doubt, and I will  
tell you the commoditie, and the discommoditie of the  
one, and the other. The Dutch footmen, are able to  
withstand, and overcome the horses : they be most spee-  
dy to march, and to be set in aray, being not laden  
with armours : of the other part, they be subiect to  
all blowes, both farre of, and at hand : because they be  
vnarmed, they be vnprofitable vnto the battaile on the  
land, and to euery fighte, where is strong resistance.  
But the Romanes withstode, and overcame the  
horses, as well as the Dutchmen, they were safe  
from blowes at hand, and farre of, being couered with  
armours : they were also better able to charge, and bet-  
ter able to sustaine charges, hauing Targettes : they  
might more aptly in the p<sup>re</sup>ace fight with the sword,  
then these with the pike, and though the Dutchmen  
haue lykewise swordes, yet being without Targetts,  
they become in such case vnprofitable : The Romanes  
might safely assaulte towncs, hauing their bodies  
cleane couered with armour, and being better able  
to couer themselves with their Targettes. So that  
they had no other incommo-  
dity, then the weightinesse  
of



of their armour, and the pain to carry them, the which things they overcame with accustoming the body to diseases, and with hardening it, to be able to induce labour. And you know, how that in things accustomed, men suffer no griefe. And you haue to vnderstand this, that the footmen may be constrained to fight with footmen, and with horse, and alwaies those be vnprofitable, which cannot either susteine the horses, or being able to susteine them, haue notwithstanding neede to feare the footmen, which be better armed, and better ordeyned then they. Now if you consider the Dutchmen, and the Romanes, you shall finde in the Dutchmen activitie (as we haue said) to overcome the horses, but great disadvantage, when they fight with men, ordeined as they themselues are, and armed as the Romanes were, so that ther shall be this aduantage moze of the one, then of the other, that the Romanes could overcome the men and the horses, the Dutchmen onely the horses.

Cosimo. I would desyre, that you would come to some moze particular ensample, whereby we may better vnderstand.

Fabritio. I say thus, that you shall finde in many places of our histories, the Romane footmen to haue overcome innumerable horses, and you shall neuer finde, that they haue bene overcome of men on foote, for default that they haue had in their armour, or thorough the vantage that the enemy hath had in the armours: For that if the maner of their arming, should haue had default, it had bene necessary, that there should follow, the one of these two things, either that fynding such, as should arme them better then they, they should not haue gone still forwarde, with their conquestes, or that they should haue taken the straungers maners, and should haue left their owne, and for that it followed not in one thing, nor in the other, there groweth that there may be easily coniectured,

## The second booke of

An ensample  
which pro-  
ueth y<sup>e</sup> Horse-  
men with sta-  
ues, cannot  
preuaile a-  
gainst footme<sup>n</sup>  
with pikes, &  
what great ad-  
uantage y<sup>e</sup> ar-  
med haue, a-  
gainst the vn-  
armed.

The victorie  
of Carminuola  
la against the  
Dutchmen.

that the manner of their arming was better then the  
sanie of any other. It is not yet thus happened to Dutch  
men, for that naughtie profe hath bene saine made  
by them, when soeuer they haue chaunced to fight with  
men on foote prepared, & as obstinate as they, the which  
is growen of the vantage, which the same haue encour-  
aged in the enemies armours. Philip Vicecounte of Mi-  
laine, being assaulted of six thousand Suizzers sent a-  
gainst them the Counte Carminuola, which then was  
his Capitaine. He with six thousand horse, and a few  
footeinen, went to meete with them, and encountring  
them, he was repulsed with his most great losse: where-  
by Carminuola as a prudent man, knew straight way  
the puissance of the enemies weapons, and how much  
against the horses they preuailed, and the debility of  
the horses, against those on foote so appoynted: and ga-  
thering his men together againe, he went to fynde the  
Suizzers, and so sone as he was nere them, he made  
his men of armes to alight from their horse, and in the  
same maner fighting with them, he slue them al, except  
three thousand: the which seeing themselves to consume  
without hauing remedie, casting their weapons to the  
ground, yielded.

Colimo. Whether of cometh so much disadvantage?

Fabritio. I haue a little afore tolde you, but seeing  
that you haue not understode it; I will rehearse it a-  
gaine. The Dutchmen (as a little before I saide vnto  
you) as it were vnarmed, to defend themselves, haue  
to offend the Pike and the Sword: they come with  
these weapons, and with their orders to finde the ene-  
mies, whom if they be well armed, to defende them-  
selves, as were the men of armes of Carminuola, which  
made them alight on foote, they came with the  
Sword, and in their orders to fynde them, and haue no  
other difficultie, then to come nere to the Suizzers, so  
that they may reach them with the sword, for that

to some as they haue gotten vnto them, they fight safely: for asmuch as the Dutcheman, can not strike the enemy with the Pike, who is vpon him, for the length of the staffe, wherefore it is conuenient for him, to put the hand to the sword, the which to him is vnprofitable, hee being vnarmed, and hauing against him an enemy, that is all armed. Whereby he that considereth the vantage, and the disadvantage of the one, and of the other, shall see, how the vnarmed, shall haue no manner of remedie, and the ouercomuning of the first fight, and to passe the first pointes of the Pikes, is not much difficult, he that fighteth being well armed: for that the battailes go (as you shall better vnderstand, when I haue shewed you, how they are set together) and in counterung the one the other, of necessitie they thrust together, after such sort, that they take the one thother by the hose and though by the Pikes some bee slaine or ouerthrowen, those that remaine on their feete, be so many, that they suffice to obtaine the victory. Here of it grew, that Carminuola ouercame them, with so great slaughter of the Swizzers, and with litle losse of his. Cosimo. Consider that those of Carminuola, were men of armes, who although they were on foote, they were couered all with steele, and therefore they were able to make the proofe they did: so that me thinkes, that a powre ought to be armed as they, minding to make the verie same proofe.

The battaile when they are a fighting, doe throng together.

Fabritio, If you should remember, how I told you the Romanes were armed, you would not thinke so: for as much as a man, that hath the head couered with Iron, the breast defended of a Corselet, and of a Targaet, the armes and the legges armed, is much more apte to defend himselfe from the Pike, & to enter among them, then a man of armes on foote. I will giue you a litle of a late ensample. There were come out of Cicilie, into the kingdome of Naples, a power  
of



## The second booke of

of Spaniardes, for to go finde Consaluo, who was besieged in Barlet, of the Frenchmen: there made against them Mounſieur de Vhigni, with his men of armes, and with about foure thousand Dutchemen on foote: The Dutchemen incountered with their Pikes lowe, and they opened the power of Spaniardes: but those being holpe, by meane of their bucklers and of the agilitie of their bodies, mingled together with the Dutchmen, so that they might reach them with a sword, whereby happened the death, almost of all them, and the victory to the Spaniards. Every man knoweth, how many Dutchmen were slaine in the battaile of Ravenna, the which happened by the very same occasion: for that the Spanish souldiours, got them within a sword's length of the Dutch souldiours, and they had destroyed them all, if of the French horsemen, the Dutchmen on foote, had not bene succoured: notwithstanding, the Spaniards close together, brought themselves into a safe place. I conclude therefore, that a good power ought not onely to be able to withstand the horses, but also not to have feare of men on foote, the which (as I haue many times sayde) proceedeth of the armours, and of the order.

How to arme  
men, and what  
weapons to ap  
point them, af  
ter y<sup>e</sup> Romane  
maner, and  
Dutch fashion

Cosimo. Tell therefore, how you would arme them?  
Fabritio. I would take of the Romane armours, and of the Dutchemens weapons, and I would that the one halfe, should be appointed like the Romanes, and the other halfe like the Dutchemen: for, that if in five thousand footemen (as I shall tell you a litle hereafter) I should haue three thousand men with Targaettes, after the Romane manner, and two thousand Pikes, and a thousand Warkebutters, after the Dutch fashion, they should suffice: for that I would place the Pikes, either in the front of the battaile, or where I should feare most the horses, and those with the Targaets and swordes, shall serue mee to make a backe to the Pikes, and to winne the battaile, as I shall

shall shew you: so that I beleue, that a power thus  
dayned, should overcome at this day, any other power.

**Cosimo**. This which hath bene said, sufficeth con-  
cerning footemen, but concerning horsemen, we desire  
to vnderstand, which you thinke moze stronger armed,  
either ours, or the antiquitie.

**Fabritio**. I beleue that in these daies, hauing respect  
to the Saddelles bolstered, and to the Stroppes not vsed  
of the antiquitie, they stand moze strongly on horse  
backe, then in the olde time, I thinke also they arme the  
moze sure: so that at this day, a band of men of armes,  
passing very much, cometh to be with moze difficul-  
tie withstode, then were the horsemen of old time: not  
withstanding for all this, I iudge, that there ought not  
to be made moze account of horses, then in olde time  
was made, for that (as afore is said) manie times in  
our dayes, they haue with the footemen receiued shame,  
and shall receiue alwayes, where they incounter, with  
a power of footemen armed, and ordered, as aboue hath  
bene declared. Tigrane king of Armenia, had against  
the armie of the Romanes, whereof was Capitaine Lu-  
cullus, C. l. thousand horsemen, amongst the which,  
were many armed, like vnto our men of armes, which  
they called Catafracti, & of the other part, the Romanes  
were about six thousand, with xlv. thousand footemen:  
so that Tigrane seeing the armie of the enemies, sayde:  
these be horses enough for an imbassage: not withstan-  
ding, incountering together, he was overthowen: and  
he that writeth of the same fight, dispraiseth those Ca-  
tafracti, declaring them to be vnprofitable: for that he  
sayeth, because they had their faces couered, they had  
much a doe to see, and to offend the enemy, and they  
falling, being laden with armour, could not rise vp  
again, nor weld themselves in any manner to preuaile.  
I say therefore, that those people or kingdomes, which  
shall esteeme moze the power of horses, then the po-

The victory  
of Lucullus, a-  
gainst Tigran  
king of Arme-  
nia.

## The second Booke of

For what purpose horsemen be most requisite.

wer of footemen be alwaies weake, and subiecte to all ruin, as by Italie hath bene seene in our time, which hath bene taken, ruinated, and ouer run with straungers, though no other fault, then for hauing taken litle care, of the seruice on foote, and being brought the soldours thereof, all on horsebacke. Yet their ought to be had horses, but for second, and not for first foundation of an armie: for that to make a discovery, to ouerrun, and to destroy the enemies countrie, and to keepe troubled and disquieted, the armie of the same, and in their armours alwaies, to let them of their victuals, they are necessary, and most profitable: but concerning for the day of battaile, and for the fight in the fildes, which is the importance of the warre, and the ende, for which the armies are ordeined, they are more meete to follow the enemy being discomfited then to do any other thing which in the same is to be done, and they be in comparison, to the footemen much inferiour.

Cosimo. There is happened vnto me two doubtles, the one, where I know, that the Parthians dyd not vse in the warre, other then horses, and yet they deuised the world with the Romanes: the other is, that I would that you should shew, how the horsemen can be withstood of footemen, and whereof groweth the strength of these, and the debilitie of those?

Fabritio. Either I haue tolde you, or I minded to tell you, how that my reasoning of the affaires of warre, ought not to passe the boundes of Europe: when thus it is, I am not bound vnto you, to make accompte of the same, which is vsed in Asia, yet I must saye vnto you thus, that the warring of the Parthians, was altogether contrary, to the same of the Romanes: for as much as the Parthians, warred all on horsebacke, and in the fight, they proceeded confusedly, and scattered, and it was a maner of fight unstable, and full of vncertaintie. The Romanes were (it may be sayde) almost



almost all on foote, & they fought close together & sure, and they ouertaine diuersly, the one the other according to the largenes, or straightnes of the situation: for that in this the Romans were superiours in the same: the Parthians, who might make great proue with the same maner of warring, considering the region, which they had to defend, the which was most large: for as much as it hath the sea coast distant a thousande myles, the riuers thone from thother, two or three dayes tourney, the Towns in like maner and the inhabitants few: so that a Romane armie heavy and slowe, by meanes of their armours, and their orders, could not ouer run it, without their grieuous hurt (those that defended it, being on horsebacke most expedite) so that they were to day in one place, & to morrow distant fiftie myles. Here of it grew, that the Parthians might preuaile with their chiuallrie onely, both to the ruine of the armie of Crassus, & to the peril of the same, of Marcus Antonius: but (as I haue told you) do not intend in this my reasoning, to speake of the warfare out of Europe, therefore I will stand vpon the same, which in times past the Romanes ordayned, and the Greakes, and as the Dutchmen do now a dayes. But let vs see to the other question of yours; where you desyre to vnderstande, what order, or what naturall vertue makes, that the footemen ouercome the horsemen. And I say vnto you first that the horses cannot goe, as the footemen in euery place: They are slower then the footmen to obey, when it is requisite to alter the order: for as much as if it bee needfull, either going forward, to tourne backwards, or tourning backward, to goe forward, or to moue themselves standing still, or going to stand still without doubt, the horsemen cannot do it so readilye as the footemen: the horsemen can not, being of some violence, disordained, retourne in their orders, but with difficultie, although the same violence cease the which

The reason why footmen are able to ouercome horsemen.

## The second Booke of

the footmen do most easily and quickly. Besydes this, it happeneth many times that a hardy man shall bee vpon a byle horse, and a colward vpon a good, wherby it followeth, that this euil matching of stomackes, makes disorder. For no man doth maruaile, that a bande of footmen, susteineth all violence of horses: for that a horse is a beast, that hath sence, and knoweth the perilles, and with an ill will, will enter in them: and if you consider, what force maketh them go forward, and what holdeth them backward, you shall see without doubt, the same be greater, which keepeth them backe, then that which maketh them go forwardes: For that the spurre maketh them go forward, and of the other side, either the sword, or the pyke, keepeth them backe: so that it hath bene scene by the olde, and by the late experience, a band of footmen to be most safe, yea, invulnerable for horses. And if you should argue to this, that the beate, with which they come, maketh them more furious to encounter, who that would withstand them, and lesse to regard the pyke, then the spurre: I say, that if the horse so disposed, begin to see, that he must runne vpon the point of the pyke, either of himselfe, he will refraine the course, so that so soone as he shall feele him selfe pricked, he will stand still at ones, or being come to them he wil tourne on the right, or on the left hand. Whereof if you wil make experience, proue to runne a horse against a wall: you shall finde few, with what so euer fury he come withall, will strike against it. Caesar hauing in Fraunce, to fight with the Suizzers, alighted, and made every man alight on fote, and to auoyde from the arayes, the horses, as a thing more mete to slye, then to fight. But notwithstanding these naturall impediments, which horses haue, the same Capitaine, which leadeth the footmen, ought to chuse wayes, which haue for horse the most impediments that may bee, and selborne tymes it happeneth, but that

How footmen  
may saue them  
selues from  
Horsemen.

that a man may saue himselfe, by the qualitie of the  
countrie: so that if thou march on the hills, the situa-  
cion doth saue thee from the same furie, whereof you  
doubt, that they go withall in the plaine, few playnes  
bee, which through the tillage, or by meanes of y<sup>e</sup> woods,  
do not assure thee, so that euery hillocke, euery bancke,  
although it be but small, taketh away the same heate,  
and euery culture where bee vines, and other trees,  
letteth the horses: and if thou come to battaile, the  
very same letteth happeneth, that chaunceth in marching:  
so as much as euery little impediment, that the horse  
hath, abateth his furie. One thing notwithstanding, I  
will not forget to tell you, how the Romanes este-  
emed so much their orders, and trusted so much to their  
weapons, that if they should haue had, to chuse either  
so rough a place to saue them selues from horses, wher  
they should not haue bene able to raunge their orders,  
or a place where they should haue neede, to feare most  
of horses, but bene able to defende their battaile, al-  
wayes they tooke this, and left that: but because it is  
time to passe to the armie, hauing armed these Sould-  
iours, according to the auncient and new vse, let vs  
see what exercises the Romanes caused them make, be-  
fore the men were brought to y<sup>e</sup> battaile. Although they  
be well chosen, and better armed, they ought with most  
great studie be exercised, so that without this exercise,  
there was neuer any Souldiour good: these exercises  
ought to be deuided into three partes, the one, so to har-  
den the bodie, and to make it apt to take paynes, and  
to be more swifter and more readier, the other, to teach  
them how to handle their weapons, the thirde, so to  
learne them to keepe the orders in the armie, as wel in  
marching, as in fighting, and in the incamping: The  
which bee three principall actes, that an armie doeth:  
so as much, as if any armie march, incampe and fight  
with order, and expertly, the Capitaine leaueeth not his  
honour,

The exercise  
of Souldiers  
ought to be de-  
uied into iij,  
parts.



## The second Booke of

What exercises the auncient common weales vsed to exercise their youth in, and what commoditie infused thereby.

How the antiquitie learned their young souldiours to handle their weapons.

honour, although the battaile should haue no good ende. Therefore all the auncient common weales, prouided these exercises in maner, by custome, and by law, that there should not be left behynde any part thereof. They exercised then their youth, for to make them swifte in running, to make them ready, in leaping, for to make them strong, in throwing the barre, or in wrestling: and these three qualities, be as it were necessary in souldiours. For that swiftnesse, maketh them apt to possesse places, before the enemy, and to come to them vnlooked for, and at vnwares to pursue them, when they are discomforted: the readines, maketh them apt to auoide a blow, to leape ouer a ditch, to winne a bancke: strength maketh them the better able to beare their armours, to encounter their enemy, to withstand a violence. And aboue all, to make the body the more apt to take paynes, they vsed to beare great burthens, the which custome is necessary: for that in difficult expeditions, it is requisite many times, that the souldiour besyde his armours, beare victuals for many dayes, and if he were not accustomed to this labour, he could not do it: and without this, there can neither be auoided a perill, nor a victorie gotten with saine. Concerning to learne how to handle the weapons, they exercised them, in this maner: they would haue y<sup>e</sup> young men, to put on armour, which should way twice as much, as their field armour, and in steede of a sword, they gaue them a cudgell leaded, which in comparison of a verie sword in deede, was most heauy: they made for every one of them, a post to be set vp in the ground, which should be in the height two yards and a quarter, and in such manner, and so strong, that the blowes should not stir nor hurle it downe, against the which poste, the young men with a Targaet, and with the cudgell, as against an enemy did exercise, and somewhyles he stroke, as though he would hurt the heade, or the face, somewhyles

while he retired backe , an other while he made forwarde:and they had in this exercise, this aduertisement, to make them apte to couer themselves, and to hurt the enemy: and hauing the countersait armours most heauie , their ordinarie armours seemed after vnto them more lighter. The Romanes , would that their Souldiours should hurt with the pike , and not with the cut, as well because the pike is more mortall, & hath lesse defence, as also to y intent, that he that should hurt, might lye the lesse open, & be more apte to redouble it, then with cuttes. Do not maruaile that these auncient men, should thinke on these small things, for that where the incounter of men is reasoned of , you shall perceiue , y every litle vauntage, is of great importance: and I remember you the same , which the writers of this declare, rather then I do teach you . The antiquitie esteemed nothing more happie , in a common weale, then to be in the same many men exercised in armes : because not the shining of precious stones and of golde maketh that the enemies submit themselves vnto thee, but onely the feare of the weapons: afterward , the errors which are made in other things, may sometimes be corrected, but those which are done in the warre, the payne straightwaie coming on , cannot be amended. Besides that, the knowledge to fight, maketh men more bold , because no man feareth to do that thing , which he thinketh to haue learned to do. The antiquitie would therefore , that their Citizens should exercise themselves , in all maner feates , and they made them to throw against the same poste , darts much heauier then the ordinarie : the which exercise , besides the making men expert in throwing , maketh also the arme more nimble , and much stronger . They taught them also to shote in the long bowe , to whoyle with the sling, and to all these things, they appointed maisters, in such manner , that after when they were chosen for to

What the antiquitie esteemed most happy in a common weale.

Monster Maisters, for exercising of young men vnexpert.

## The second Booke of

go to the warre, they were now with minde and disposition, souldiours. For they remayned them to learne other, then to goe in the orders, and to maintaine themselves in those, either marching, or fighting: The which most easely they learned, mingling themselves with those, which had long time serued, whereby they knew how to stand in the orders.

Cosimo. What exercises would you cause them to make at this present?

The exercises  
that souldiers  
ought to make  
in these daies.

Fabricio. A good many of those, which haue bene declared, as running, and wrestling, making them to leape, making them to labour in armours, much heavier then the ordinarie, making them shote with Crosse bowes, and long bowes, wherevnto I would ioyne the harkabus, a new instrument (as you know) very necessary, and to these exercises I would vse all the youth of my state, but with greater industrie, and more sollicitatione y same part, which I should haue already appointed to serue, and alwaies in the idle dayes, they should be exercised.

The exercise  
of swimming.

I would also that they should learne to swimme, the which is a thing very profitable: for that there be not alwaies, bridges ouer rivers, boats be not alwaies readye: so that thy armie not knowing how to swimme, remayneth depriued of many commodities: and many occasions to worke well, is taken away.

Tiber is a river running through Rome, the water whereof will neuer corrupt

The Romanes for none other cause had ordeyned, that the young men should exercise themselves in Campus Martius, then onely, for that hauing Tiber at hand, they might, being wearied with the exercise on land, refresh themselves in the water, and partly in swimming, to exercise themselves. I would make also, as y antiquitie, those which should serue on horsebacke to exercise, the which is most necessarie, for that besides to know how to ride, they must know how on horsebacke, they may preuaile of the. And for this they had ordeyned horses of wood, vpon the which they practised, to

The exercise  
of vaulting, &  
commoditie  
thereof.

leape



leape by armed, and unarmed without any help, and on euerie hand: the which made, that at ones, and at a beck of a Capitaine, the horsemen were on foote, and likewise at a token, they mounted on horseback. And such exercises, both on foote and on horsebacke, as they were then easy to be done, so now they should not be difficult to the same common weale, or to the same Prince which would cause them to be put in practise of their young men. As by experience is seene, in certayne Cities of the West countrie, where is kepte a liue like manners with this order. They deuide all their inhabitants into diuers partes: and euery part they name of the kind of those weapons, that they vse in the warre. And so; that they vse Pikes, Halberds, Bowes, and Harkebutes, they call them Pike men, Halberders, Harkebutters, and Archers: Therefore, it is meete for all the inhabitants to declare, in what orders they will be appointed in. And for that all men, either for age, or for other impediments, be not fit for the warre, euery order maketh a choise of men, & they call the the swozen, whom in idle daies, be bound to exercise themselves in those weapons, whereof they be named: & euery man hath his place appointed him of the cominaltie, where such exercise ought to be made: and those which be of the same order, but not of the swozen, are contributaries with their mony, to the same expenses, which in such exercises be necessarie: therefore the same y they do, we may do. But our small prudence doth not suffer vs, to take any good way. Of these exercises there grew, that the antiquitie had good souldiours, and that now those of the West, be better men then ours: for as much as the antiquitie exercised them, either at home (as those common weales do) or in the armies, as those Emperours did, for the occasions aforesaid: but we, at home will not exercise them, in Campe we cannot, because they are not our subjects, & for that we are not able to binde

An order that is taken in certain countries, concerning exercises of warre.

## The second Booke of

What know-  
ledge a soul-  
diour ought to  
haue.

then to other exercises then they themselves list to do :  
the which occasion hath made, that first the armies bee  
neglected, & after the orders, and that the kingdomes, and  
the common weales, in especially Italians, liue in such  
debelitie. But let vs tounke to our order, and following  
this matter of exercises, I say, how it suffiseth not to  
make good armies, for hauing hardened the men, made  
them strong, swift, and handsome, where it is needed  
full also, that they learne to stand in the orders, to obey  
to signes, to soundes, and to the voice of the capitayne:  
to know, standing, to retire themselves, going for-  
wardes, both fighting, & marching to maintayne those :  
because without this knowledge, with all serious dili-  
gence obserued, and practised, there was neuer armie  
good: and without doubt, the fierce and disordered men,  
be much more weaker, then the fearefull that are orde-  
red, for that the order driueth away from men feare,  
the disorder abateth fiercenesse. And to the intent you  
may the better perceiue that, which here following  
shalbe declared, you haue to vnderstand, how euerie  
nation, in the ordering of their men to the warre, haue  
made in their host, or in their armie, a principall mem-  
ber, the which though they haue varied with the name,  
they haue litle varied with the number of the men: for  
that they all haue made it, betwene sixe & viii. M. men,  
This number of men was called of the Romanes, a  
Legion, of Greekes, a Fallange: of Frenchmen, Caterua:  
this very same in our time of the Suizzers, whom only  
of the auncient warfare, keepe some shadow, is called  
in their tongue that, which in ours signifieth the maine  
battaile. True it is, that euery one of them, hath after  
deuided it, according to their purposes. Therefore mee  
thinkes best, that we ground our talke, vpon this  
name most knowne, and after, according to the aun-  
cient, & to the orders now a dayes, the best that is pos-  
sible to ordeyne it: and because the Romanes deu-  
ded

ded their Legion, which was made betwene five and  
 five thousand men, in ten Cohortes, I will that we de-  
 uide our maine battaile, into ten battails, and that we  
 make it of five thousand men on fote, and we wil giue  
 to euery battaile. CCCC L. men, of which shall be  
 400. armed with heauy armour, and 50. with light ar-  
 moure: the heauie armed, shall be 300. Targettes  
 with swordes, and shall be called Target men: and  
 100. with pikes, which shal be called ordinary pykes:  
 the light armed shalbe. 50. men armed with harkabuses,  
 Crosse bowes, and Partisans, and small Targaets, and  
 these by an auncient name, were called ordinary Veliti:  
 all the ten battails therfore, comes to haue three thou-  
 sand Targaet men, a thousand ordinary pykes, 400.  
 ordinary Veliti, all which make the number of sower  
 thousand and five hundred men. And we said, that wee  
 would make the maine battaile of five thousand: ther-  
 fore there must be added an other thousande, five hun-  
 dred men, of the which I will appoint a thousande with  
 pikes whom I will call extraordinary Pykes, and five  
 hundred light armed, whom I will call extraordinary  
 Veliti: and thus my men should come (as a little be-  
 fore I haue sayd) to be made halfe of Targaets, and  
 halfe of pikes and other weapons. I would appoint to  
 euery battaile, or band of men, a Conestable, sower  
 Centurions, and fourtie Peticapitains, and mozeouer  
 a heade to the ordinary Veliti, with five Peticapi-  
 tains: I would giue to the thousande extraordina-  
 rie pikes, three Conestables, ten Centurions, and  
 a hundred peticapitaines: To the extraordinary Veli-  
 ti, 2. Conestables, 5. Centurions, and 50. peticapi-  
 tains: I would then appoint a general head, ouer all  
 maine battaile: I would that euery Conestable should  
 haue an Ansigne, and a Drum. Thus there shoulde be  
 made a maine battaile of ten battailes of three thou-  
 sande Targaet men, of a thousande ordinary Pykes,

A Cohort is a  
 band of men.  
 Of what num-  
 ber & of what  
 kinde of ar-  
 mours & wea-  
 pons a maine  
 battaile ought  
 to be, and the  
 distributing &  
 appointing of  
 the same.

Velitie are  
 light armed  
 men.

The Captains  
 that are apoin-  
 ted to euery  
 band of men.



## The second Booke of

of a thousand extraordinary, of five hundred ordinary  
Veliti, of five hundred extraordinary, so there should  
come to be six thousand men, amongst the which  
there should be 9. D. Peticapitaines, and moreover  
xv. Constables, with xv. Drummes, and xv. Ansignes,  
lv. Centurions, r. heads of the ordinary Veliti, and a  
capitaine ouer all the maine battaile, with his Ansigne  
and Drumme: and I haue of purpose repeated this or-  
der the oftner, to the intent, that after when I shall  
shew you the maners of ordering the battailes, and the  
armies you should not be confounded: I say therefore  
how that, that king, or that common weale, which in-  
tendeth to ordeine their subiectes to armes, ought to  
appoint them with these armours and weapons, and  
with these partes, and to make in their countrie so ma-  
ny maine battails, as it were able: & when they should  
haue ordeined them, according to the foresaid distribu-  
tion, minding to exercise them in the orders, it should  
suffice to exercise euery battaile by it selfe: and al-  
though the number of the men, of euere one of them  
cannot by it selfe, make the fashion of a iust armie, not-  
withstanding, euery man may learne to do the same,  
which particularly appertaineth vnto him: for that in  
the armies, two orders is obserued, the one, the same  
that the men ought to do in euery battaile, and the o-  
ther that, which the battaile ought to do after, when it  
is with y other in armie. And those men, which do wel  
the first, most easily may obserue the second: But with-  
out knowing the same, they canne neuer come to the  
knowledge of the seconde. Then (as I haue saide) euery  
one of these battailes, may by themselves, learne to  
keepe the orders of the arayes, in euery quality of mo-  
uing, and of place, & after learne to put themselves to-  
gethers, to vnderstand the soundes, by meanes whereof  
in the fight they are commaunded, to learne to know  
by that, as the Gallies by the whistell, what ought to  
be

Two orders  
obserued in an  
armie.

be done, either to stand still, or to tourne forward, or to tourne backward, or which way to tourne the weapons and the face: so that knowing how to keepe well the array after such sort, that neither place nor moving may disorder them, understanding well the commandements of their heads, by meanes of the sounde, and knowing quickly, how to retourne into their place, these battails may after easily (as I haue said) being brought many together, learne to do that, which all the body together with the other battails in a iust armie is bound to do. And because such vniuersall practise, is also not to be esteemed a litle, ones or twice a yeare, when there is peace, all the maine battaile may be brought together, to giue it the fashion of an whole armie, some daies exercising them, as though they should fight a field, setting the front, and the sides with their succours in their places. And because a capitaine ordeineth his host to the field, either for count of the enemy he seeth, or for that, of which without seeing he doubteth, he ought to exercise the armie in the one manner, and in the other, & to instruct them in such sort, that they may know how to march, and to fight when neede should require, shewing to his soldours, how they should gouerne themselves, when they should happen to be assaulted of this or of that syde: and where hee ought to instruct them how to fight against the enemy, whom they shoulde see, hee must shew them also, how the fight is begun, and where they ought to retyre: being ouerthrowen, who hath to succede in their places, to what signes, to what soundes, to what voices they ought to obey, and to practise them in such wise in the battaile, and with fayned assaultes, that they may desire the very thing in deede. For that an armie is not made courageous, because in the same be hardie men, but by reason the orders thereof be well appointed: For as much as if I be one of the first fighters, and do know  
viii. being

How a captain must instruct his Souldiers how they ought to gouerne themselves in the battaile.

## The second booke of

being overcome, where I may retire, and who hath to succede in my place, I shall alwaies fight with boldnesse, seeing my succour at hande. If I shall be one of the second fighters, the first being driven backe, and ouerthrowen, I shall not be afraid, for that I shall haue presupposed that I may be, and I shall haue desire to be the same, which may giue the victorie to my maister, and not to be any of the other. These exercises be most necessary, where an armie is made of new, and where the old army is, they be also necessary: for that it is also seene, how the Romanes knew from their infancy, the order of their armies, notwithstanding, those Capitaines before they should come to the enemy, continually did exercise them in those. And Iosephus in his history sayeth, that the continuall exercises of the Roman armie, made that all the same multitude, which follow the campe for gaine, was in the day of battaile profitable: because they all knew how to stande in the orders, and to fight keeping the same: but in the armies of new men, whether thou haue put them together, to fight straight waie, or that thou make a power to fight, when neede requires, without these exercises, as wel of the battails seuerally by themselves as of all the armie, is made nothing: wherefore the orders being necessary, it is conuenient with double industry and labour, to shew them vnto such as knoweth them not, and so to teach it, many excellent Capitaines haue trauailed, without any respect.

Colimo. He thinkes that this reasoning, hath somewhat transported you: for as much, as hauing not yet declared the wayes, with the which the battails be exercised, you haue reasoned of the whole armie, and of the day of battaile.

Fabritio. You say trueth, but surely the occasion hath bene the affection, which I beare to these orders, and the griefe that I feele, seeing they be not put in vze: not  
with



withstanding, doubt not but that I will tourne to the purpose: as I haue saide, the chiefe importaunce that is in the exercise of the battailes, is to know how to keepe well the arraies: and because I tolde you that one of these battailes, ought to be made of foure hundred men heauie armed, I will stay my selfe vpon this number. They ought then to be brought into lxxx. rankes, & siue to a ranke: afterward going fast, or softly, to knit them together, and to lose them: the which how it is done, may be shewed better with deedes, then with wordes. Which needeth not greatly to be taught, so that euery man who is practised in seruice of warre, knoweth how this order proceedeth, which is good for no other, then to vse the souldiours to keepe the ray: but let vs come to put together one of these battailes, I say, that ther is giuen them three fashions principally, the first, and the most profitablest is, to make all massiue, and to giue it the fashion of two squares, the second is, to make it square with the front hoined, the third is, to make it with a voide space in the middest: the manner to put men together in the first fashion, may be of two sortes, the one is double the rankes, that is, to make the second ranke enter into the first, the.iiii. into the third, the siue into the siue, and so forth, so that where there was. lxxx. rankes, siue to a ranke, they may become. xl. rankes r. to a ranke. Afterward cause them to double ones moze in the same maner, setting & one ranke into an other, & so there shall remayn twentie rankes, twentie men to a ranke: this maketh two squares about, for as much as albeit that there be as many men the one way, as in the other, notwithstanding towardes the head, they ioyne together, that the one side toucheth the other: but by the other way, they be distant the one from the other, at least a yard and a halfe, after such sorte, that the square is much longer, from the backe to the fronte. then from the one side to thother: and because we haue

The chiefe importance in the exercising of bandes of men.

Three principall fashions for thordering of men into battaile raie.

The maner how to bring a band of men into battaile raie after a square fashion

## The second booke of

The better  
way for the or-  
dring of a bād  
of men in bat-  
tall, & of the  
first fi-  
cion,

of this present, to speake often of the partes afore, of be-  
hind, & of the sides of these battailes, and of all the ar-  
mie to gether, know you, that when I say either head  
or front, I meane the part afore, when I shall saye  
backe, the part behind, when I shall saye flankes, the  
partes on the sides. The fiftie ordinary belitie of the bat-  
taile, must not mingle with other rankes, but so some  
as the battaile is fashioned, they shalbe set a long by the  
flankes thereof. The other way to set together the bat-  
taile is this, and because it is better then the first,  
I will set it before your eyes iust, how it ought to be or-  
dained. I beleue that you remember of what number  
of men, of what heades it is made, and of what armours  
they are armed: then the fashion, that this battaile ought  
to haue, is (as I haue saide) of twentie rankes, twentie  
men to a ranke, five rankes of Pikes in the front, and  
fifteene rankes of Targaettes on the backe, two Cen-  
turiōs standing in the front, two behind on the backe,  
who shall execute the office of those, which the antiquity  
called Tergiductory. The Conestable with his Ansigne,  
and with the Drumme, shall stand in the same space,  
that is betwene the five rankes of the Pikes, and the  
fifteene of the Targaettes. Of the Deticaptaynes, there  
shall stand one vpon euerie side of the rankes, so that  
euerie one may haue on his side his men, those Detica-  
pitaines, which shalbe on the left hand, to haue their  
men on the right hand: those Deticapitaines, which  
shalbe on the right hand, to haue their men on the left  
hand. The fiftie Beliti, must stand a long the flankes,  
and on the backe of the battaile. To minde now,  
that this battaile may be set together in this fashion,  
the men going ordinarlye, it is conuenient to order  
them thus. Make the men to be brought into, xxx.  
rankes, five to a ranke, as a litle afore we haue said,  
leaving the Beliti either at the head, or at the taile,  
so that they stand out of this order: and it ought to be  
ordained

ordayned, that euerie centurion haue behind his backe  
twentie rankes , and to be next behind euerie Centu-  
rion, five rankes of Pikes, and the rest Targaettes.  
The Conestable shall stand with the Drum , and the  
ansigne, in the same space, which is between the Pikes ,  
and the Targaettes of the second Centurion , and to  
occupie the place of three targaet men. Of the Peticap-  
taines , twentie shall stand on the sides of the rankes,  
of the first Centurion , on the left hand , and twentie  
shall stand on the sides of the rankes , of the last Cen-  
turion on the right hand . And you must vnderstand,  
that the Peticapitaine , which hath to leade the Pikes,  
ought to haue a Pike, & those that lead the Targaettes,  
ought to haue like weapons . When the rankes being  
brought into this order, and minding in marching , to  
bring them into battaile , for to make the head , the  
first Centurion must be caused to stand still , with the  
first twentie rankes , and the second to procede mar-  
ching , and tourning on the right hand , he must go to a-  
long the sides of the twentie rankes that stand still, till  
he come to be euen with the other Centurion, where he  
must also stand still , and the third Centurion, to pro-  
ceede marching , likewise tourning on the right hand,  
and along the sides of the rankes that stand still, must  
go so farre, that he be euen with the other two Centu-  
rions, and he also standing still , the other Centurion  
must follow with his rankes , likewise tourning on the  
right hand , along the sides of the rankes that stand  
still, so far that he come to the head of the other , and  
then to stand still , and straight waite two Centurions  
onely, shall depart from the front , and go to the backe  
of the battaile, the which cometh to be made in the same  
maner, and with the same order iust, as a litle afore I  
haue shewed you . The Velitie must stand along , by  
the flanks of the same , according as is disposed in the  
first way , which way is called redoubling by right  
line,



## *The second Booke of*

line, this is called redoubling by flanke: the first way is more easy, this is with better order, and cometh better to passe, and you may better correcte it, after your owne maner, for that in redoubling by right line, you must be ruled by the number, because five maketh ten, ten twentie, twentie forty, so that with redoubling by right line, you cannot make a head of fiftene, nor of five and twentie, nor of thirtie, nor of five and thirtie, but you must go where the same number will lead you.

And yet it happeneth euerie day in particular affaires, that it is conuenient to make the forward with five hundred, or eight hundred men, so that to redouble by right line, should disorder you: therefore this liketh me better: that difficultie that is, ought most with practise, and with exercise to be made easy. Therefore I say vnto you, how it importeth more then any thing, to haue the souldiours to know how to set themselves in aray quickly, and it is necessary to keepe the in this battaile, to exercise them therein, and to make them to go apace, either forward or backward, to passe through difficult places, without troubling the order: for as much as the souldiours, which can do this well, be experte souldiours, and although they haue neuer seene enemies in the face, they may be called olde souldiours, and contrariwise, those which can not keepe these orders, though they haue been in a thousand warres, they ought alwayes to be reputed new souldiours. This is, concerning setting them together, when they are marching in small ranks: but being set, and after being broken by some accident or chaunce, which groweth either of the situation, or of the enemy, to make that in a sodaine they may come into order againe, this is the importance and the difficultie, and where is needfull much exercise, and much practise, and wherein the antiquitie bestowed much studie. Therefore, it is necessarie to doe two thinges, first to haue this battaile full of countersignes,

ter signes, the other to keepe alwayes this order, that those same men may stand alwayes in the ranke, which they were first placed in: as for insample, if one haue begon to stand in the seconde, that hee stande after alway in that, & not onely in that selfe same rank, but in that selfe same place: for the obseruing whereof (as I haue sayd) be necessary many countersignes. In especially it is requisite, that the Ansigne be after such sorte countersigned, that companing with the other battels, it may be knowen from them, according as the Constable, & the Centurions haue plumes of feathers in their heads different, and easie to be knowen, and that which importeth most, is to ordeine that the peticaptaines be knowen. Wherevnto the antiquity had so much care, that they would haue nothing els wrytten in their head peeces, but the number that they were named by, calling them first, second, third, and fourth, &c. And yet they were not contented with this, but made euery soldour to haue wrytten in his targaet, the number of the rank, and the number of the place, in which ranke hee was appointed. Then the men being countersigned thus, and bled to stand betweene these limits, it is an easie thing, they being disordered, to set them all againe quickly into order: considering, that the Ansigne standing still, the Centurions, and the Peticaptaines may gesse their places by the eye, and being brought the left of the left, the right of the right, with their accustomed distance, the soldours lead by their rule, and by the differences of the cognisances, may bee quickly in their proper places, no other wise, then as if the boordes of a tunne should be taken a sunder, which being firste marked, most easily may be set together againe, where the same being not countersigned, were impossible to bring into order any more. These things with diligence and with exercise are quicklye taught, and quickly learned, and being learned, with

How to exercise men, & to take such order, whereby a band of men may by whatsoeuer chance disorder, may straightway be brought into order againe.

## The second Booke of

difficulty are forgotten: for that the new men, be lead of the olde, and with time, a prouince with these exercises, may become thoroughly practised in the warre. It is also necessary to teach them, to tourne themselves all at ones, and when neede requires, to make of the flankes, and of the backe, the front, and of the fronte, flankes, or backe, which is most easy: because it sufficeth that euery man do tourne his body, towards the same part that he is commaunded, & where they tourne their faces, there the front commeth to be. True it is, that when they tourne to any of the flankes, the orders tourne out of their proportion: for that from the breast to the backe, ther is little difference, and from the one flanke to the other, there is very much distance, & which is all contrary to the ordinarie order of the battaile: therefore it is conuenient, that practise and discretion, do place them as they ought to be: but this is small disorder, for that most easily by themselves, they may remedy it. But that which importeth more, and where is requisite more practise, is when a battaile would tourne all at ones, as though it were a whole body, here is meete to haue great practise, and great discretion, because mynding to tourne, as for insample on the lefte hande, the left corner must stand still, and those that be next to him that standeth still, must march so softly that they that be in the right corner, neede not to run: otherwise all thing should be confounded. But because it happeneth alwaies, when an army marcheth from place to place, that the battails, which are not placed in the fronte, shall be driuen to fight not by heade, but either by flanke, or by backe, so that a battaile must in a sodaine make of flanke, or of backe, heade: and mynding that like battailles in such case, may haue their proportion, as aboue is declared, it is necessary, that they haue the pykes on the same flanke, that ought to be head, and the Picapitaines, Centurions

What aduertisement ought to be vsed in turning about a whole band of men, after such sort, as though it wer but one bodie.



turions, and Conestables, to resort accordingly to their places. Therfore to mynd to do this, in plasing them together, you must ordeine the foure scoze rankes, of fise in a ranke, thus: Set all the pikes in the first twentie rankes, and place the Peticapitaines thereof, fise in the first places, and fise in the last: the other thre scoze rankes, which come after, be all of Targaettes, which come to be thre Centuries. Therefore the first and the last ranke of euery Centurion, would be Peticapitaines, the Conestable with the Ansigne, and with the Drumme, must stand in the middest of the first Centurie of Targaets, and the Centurions in the head of euery Centurie. The bande thus ordeined, when you would haue the pykes to come on the lefte flanke: you must redouble Centurie by Ceturie, on the right flank: if you would haue them to come on the right flanke, you must redouble the on the left. And so this battail tourneth with the pikes vpon a flanke, and the Conestable in the middest: the which fashon it hath marching: but the enemie comming, and the tyme that it would make of flanke head, it needeth not but to make euery man to tourne his face, towarde the same flanke, where the pikes be: and then the battail tourneth with the rankes, and with the heads in the same manner, as is aforesaide: for that euery man in his place, except the centurions, and the centurions straight way, and without difficultie, place them selues: But when they in marching, should be driuen to fight on the back, it is conuenient to ordeine the rankes after such sort, that setting them in battaile, the pykes may come behynde, and to do this, there is to be kept no other order, then where in ordering to battaile, by the ordinarpe, euery Centurie hath fise rankes of Pykes before, to cause that they may haue them behynde, and in all the other partes to obserue the order, which I declared first.

How to order a band of men after such sort that they may make their front against the enemie of which flanke they list.

How a band of men ought to be ordered, when in marching they should be constrained to fight on their backs.

## The second Booke of

Cosimo. You haue tolde (if I do well remember  
me) that this maner of exercise, is to be able to bring  
these battailes together into an armie, and that this  
practise, serueth to be able to order themselues in the  
same. But if it should happen, that these 400. and 50.  
men, should haue to do an act seperate, how would you  
order them?

Fabritio. He that leadeth them, ought then to iudge,  
where he will place the pykes, and there to put them,  
the which doth not repugne in any part to the order  
aboue witten: for that also, though the same be the  
maner, that is obserued to fight a fiede, together with  
the other battailes, notwithstanding it is a rule, which  
serueth to all those wayes, wherin a band of men should  
happen to haue to do: but in shewing you the other two  
wayes of me propounded, of ordering the battailes, I  
shall also satisfie you moze to your question: for that  
either they are neuer bled, or they are bled whe a bat-  
tyle is alone, and not in company of other, and to come  
to the way of ordering them, with two hornes, I say,  
that thou oughtest to order the 80. rankes, fise to a  
ranke, in this maner. Place in the middest one Centu-  
rion, and after him 25. rankes, which must be with two  
pykes on the left hand, and with thre Targaets on  
the right, and after the first fise, there must be put in  
the twentie following, twentie Deticaptaines, all be-  
twene the pykes, and the targaets, except those which  
beare the pyke, whom may stand with the pikes: after  
these 25. rankes thus ordered, there is to be placed  
an other Centurion, and behynde him fiftene rankes  
of Targaettes: after these Conestable betwene the  
Drum and the Ansigne, who also must haue after him,  
other fiftene rankes of targaettes, after this the third  
Centurion must be placed, and behynd him 25. rankes,  
in euerye one of which, oughte to be thre Tar-  
gaettes on the left flanke, and two pykes on the  
right

How a battail  
is made with  
two hornes.

right, and after the five first rankes, there must bee xx. Deticaptaines placed betwen the Pikes, and the Targaettes: after these rankes, the fourth centurion must follow. Intending therefore, of these rankes thus ordered, to make a battaile with two hornes, the first centurion must stand still, with the xxv. rankes which bee behinde him, after the second centurion must moue, with the fiftene rankes of Targaetts, that bee behind him, and to tourne on the right hand, and by by the right flank of the xxv. rankes, to go so farre, that he arrive to the xv. ranke, and there to stand still: after, the constable must moue, with the fiftene rankes of Targaettes, which be behind him, and turning likewise on the right hand, by by the right flank of the fiftene rankes, that were first moued, must march so farre, that he come to their heads, and there to stand still: after the third centurion must moue with the xxv. rankes and with the fourth centurion, which was behind, and turning by straight, must go along by the right flank of the fiftene last rankes of the targaettes, and not to stand still when he is at the heades of them, but to follow marching so farre, that the last ranke of the xxv. may come to be even with the rankes behinde. And this done, the centurion, which was head of the first fiftene rankes of Targaettes, must goe away from thence where hee stood, and go to the backe in the left corner: and thus a battaile shall be made of xxv. rankes, after twentie men to a ranke, with two hornes, vpon every side of the front one horne, and euerie one, shall haue tenne rankes, five to a ranke. and there shall remaine a space betwen the two hornes, as much as contayneth tenne menne. which tourne their sides, y one to the other. Betwen the two hornes, the captaine shall stand, and on euerie point of a horne, a centurion: There shall bee also behind, on euerie corner, a centurion: there shall be two rankes of



## The second Booke of

The ordning  
of a battaile  
with a voide  
space in the  
middelt.

of Pikes, and xx. Deticaptaines on euery flanke. These two hornes, serue to keepe betwene them the artillerie, when this battaile should haue any with it, and the cariages: The Melitie must stand a long the flankes, vnder the Pikes. But minding to bring this horned battaile, with a void space in the middelt, there ought no other to be done, then of fiftene rankes, of twentie to a ranke, to take eight rankes, and to place them on the pointes of the two hornes, which then of hornes, become backe of the void space. In this place, the cariages are kept, the Capitaine standeth, and the Ansigne, but neuer the Artillerie, the which is placed either in the frount, or a long the flankes. These be the waies, that a battaile may vse when it is constrayned to passe alone through suspected places: notwithstanding the massiue battaile without hornes, and without any such voide place is better, yet purposing to assure the disarmed, the same horned battaile is necessarie. The Suizzers make also many fashions of battailes, among which, they make one like vnto a crosse: because in the spaces that is betwene the armes thereof, they keepe safe their Harkebuters frō the daunger of the enemies: but because such battailes be good to fight by them selues, and my intent is to shew, how many battailes vnited, do fight with the enemy, I will not labour further in describing them, Cosimo. We thinke I haue beye well comprehended the way, that ought to be kept to exercise the men in these battailes: But (if I remember me well) you haue said, how that besides the ten battailes, you ioyne to the maine battaile, a thousand extraordinary Pikes, and five hundred extraordinarie Melitie: will you not appointe these to be exercised?

Fabritio. I would haue them to bee exercised, and that with most great diligence: and the Pikes I would exercise, at least ansigne after ansigne, in the orders of the battailes, as the other: For as much as these should

should do me more seruice, then the ordinarie battailes, in all perticular affaires: as to make guides, to get batties, and to do like thinges: but the Veliti, I would exercise at home, without bringing them together, for that their office being to fight a sunder, it is not meete, that they should companie with other, in the common exercises: for that it shall suffice, to exercise them well in the perticular exercises. They ought then (as I first told you, now me thinkes no labour to rehearse it againe) to cause their men to exercise themselves in these battailes, whereby they may know how to keepe the raze, to know their places, to turne quickly, wheither enimie, or situatio troubleth the: for that, whe they know how to do this, the place is after easely learned, which a battaile hath to keepe, & what is the office thereof in the armie: and when a prince, or a comon weale, will take the paine, and will vse their diligence in these orders, and in these exercising, it shall alwaies happen that in their countrie, there shall bee good souldiours, and they to be superious to their neighbours, and shalbe those, which shall gine, and not receiue the lawes of other men: but (as I haue said) the disorder wherein they liue, maketh that they neglect, and do not esteeme these things, and therefore our armies be not good: and yet though there were either head, or member naturally vertuous, they cannot shew it.

Cosimo. What cariages would you, that euery one of these battailes should haue?

Fabritio. First, I would that neither Centurion, nor Petcaptaine, should be suffered to ride: and if the conestable would needes ride, I would that he should haue a Mule, and not a horse, I would allot him two cariages, and one to euery Centurion, and two to euery three Petcaptaines, for that so many will lodge in a lodging, as in the place thereof we shall tell you: So that euery battaile will come to haue xxxvi.

h.

carriz of men.

To what purpose y pikes & veliti, extraordinary, must serue.

Neither Centurion nor petcaptaine ought not to ride.

What cariages the Captaines ought to haue, & the number of cariages requisite to euery band

## The second Booke of

carriages, the which I would should carrie of necessitie the tentes, the vessels to seth meate, ares, barres of Iron sufficient to make the lodgings, and then if they can carrie any other thing, they may do it at their pleasure.

Colimo, I beleue that the heades of you, ordeyned in euerie one of these battayles, be necessary: albeit, I would doubt, least that so many commaunders, should confound all.

Fabritio, That should be, when it were not referred to one man, but referring it, they cause order, yea, and without them, it is impossible to gouerne an armie: for that a wall, which on euerie part inclineth, requirerh rather to haue many proppes, & thicke, although not so strong, then few, though they were strong: because the vertue of one a lone, doth not remedie the ruine a farre of. And therefore in the armies, and among euerie tenne men, it is conuenient that there be one, of more life, of more heart, or at least wise of more authoritie, who with stomacke, with wordes, and with example, may keepe them constant, and disposed to fight, & these thinges of me declared, be necessarie in an armie, as the heads, the Antiques, and the Drummes, is seene that we haue them all in one armie, but none doth his office. First to munde that the Detieaptaynes do the same, for which they are ordeyned, it is necessary (as I haue said) that there be difference, betwene euerie one of them and their men, and that they lodge together, doing their duties, standing in the order with them: for that they placed in their places, be a rule & a temperance, to maintaine the rayes straight and steebie, and it is impossible that they disordered, or disordering doe not reduce themselves quickly into their places. But we now adays, do not vse them to other purpose, then to giue them more wages, then to other men, and to cause that they doe some particular seate: The verie same hapeneth



happeneth of the Ansigne bearers, for that they are kept rather to make a faire muster, then for any other warlike vse: but the antiquitie vled them for guides, and to bring themselues againe into order: for that euery man, so soone as the Ansigne stood still, knew the place, that he kept nere to his Ansigne, wherunto he resorted alwayes: they knew also, how that the same moving or standing, they should stay or moue: therefore it is necessary in an armie, that there be many bodie, & euery band of men to haue his Ansigne, and his guide: wherefore hauing this, it is mete that they haue stomackes enough, and by consequence life enough. Then the men ought to march according to the Ansigne: and the Ansigne to moue according to the Drumme, the which Drum wel ordered, commaundeth to the armie, the which going with paces, that answereth the time of the same, wil come to keepe easily the orders: for which cause the antiquity had Shalmes, Flutes, and soundes perfectly timed: for as much as like as he that dances, proceedeth with the tune of the Musicke, and going with the same doth not erre, euen so an armie obeying in moving it selfe to the same sound, doth not disorder: and therefore they varied the sounde, according as they would varie the motion, and according as they would inflame, or quiet, or staye the myndes of men: and lyke as the sound were diuers, so diuersly they named them: the sound Dozico, ingendered constancie, the sound Frigio, furie: whereby they say, that Alexander being at the table, and one sounding the sound Frigio, it kyndled so much his mynd, that he layed hand on his weapons. All these manners should be necessary to finde againe: and when this should be difficult, at least there would not be left behinde those that teach the Souldiour to obey, the which euery man may vary, and ordayne after his owne fashion, so that with practise, hee accustometh the eares of his soul

To what purpose Ansignes ought to serue

For what purpose Drumers ought to be vled.

The proprietie that sounds of instruments haue in mens mindes.

## The second Booke of

diours to know it : But now a dayes of this sound there is no other fruite taken for the most part, then to make a rumour.

Cosimo. I would desyre to understand of you, if euer with your selfe you haue discovered, whereof groweth so much vilenesse, and so much disorder, and so much negligence in these dayes of this exercise?

A notable discourse of the author declaring whereof groweth so much vilenesse disorder, and negligence in these daies, concerning the exercises of warre.

Fabritio. With a good will I will tell you the same that I thinke. You know that of the excellent men of warre, there hath bene named many in Europe, few in Affric, and lesse in Asia: this grew for that these two last partes of the world, haue had not past one king, or two, and few common weales but Europe onely, hath had many kingdomes, and infinite common weales, where men became excellent, and did shewe their vertue, according as they were set a worke, and brought before their Prince, or common weale, or king that he be: it followeth therefore, that where be many dominions, there ryle many valiaunt men, and where be few, fewe. In Asia is found Ninus, Cirus, Artaxerxes, Michredates: and very few other, that to these may be compared. In Affrick, is named (letting stand the same auncient Epypt) Masfinissa, Iugurta, and those capitaines, which of the Carthaginens common weale were nourished, whom also in respecte to those of Europe are most few: because in Europe bee excellent men without number, and so many more should be, if together with those should bee named the other, that be through the malignity of tyme extinct: for that the world hath bene most vertuous, where hath bene most states, which haue fauoured vertue of necessitie, or for other humaine passion. There rose therefore in Asia few excellent men: because the same prouince was all vnder one kingdome, in the which for the greatnesse thereof, the same standing for the most part of tyme idle, there could not grow men in

doings excellent. To Affricke there happened the very same, yet there were nourished moze then in Asia, by reason of the Carthaginens common weale: for that in common weales, there grow moze excellent men, then in kingdomes: because in common weales for the most part, vertue is honoured, in kingdomes it is held backe: whereby groweth, that in the one, vertuous men are nourished, in the other they are extinte. Therefore he that shall consider the partes of Europe, shall finde it to haue bene full of common weales, and of pryncedomes, the which for feare that the one had of the other, they were constrained to kepe lively the warlike orders, and to honour them, which in those most preuailed: for that in Græce, besides the kingdom of the Macedonians, there were many common weales, & in euery of them were bred most excellent men. In Italie, were the Romans, the Samnites, the Toscanes, the Gallie Cisalpini. Fraunce, and Almaine, were full of common weales and pryncedomes. Spaine likewise: and although in comparison of the Romanes, there are named few other, it groweth through the malignity of the writers whom follow fortune, and to them for the most part it sufficed to honour the conquerours: but it standeth not with reason, that betwene the Samnites, and the Toscanes, whom fought 150. yeares with the Roman people, before they were overcome, there should not grow exceeding many excellent men. And so likewise in Fraunce, and in Spayne: but that vertue which the writers did not celebrate in paticuler men, they celebrated generally in the people, where they exalte to the starres, the obstinatnesse that was in them, to defende their liberty. Being then true, that where be most dominions, there riseth most valiaunt men, it followeth of necessite, that extinguishing those, vertue is extinct straight way, the occasion decaying, which maketh men vertuous. Therefore, the Ro-



## The second booke of

The causes  
why the aun-  
cient orders  
are neglected

mane Emperre being after increased, and having extin-  
guished all the common weales, and Princedomes of  
Europe, and of Affricke, and for the most part those of  
Asia, it left not any way to vertue, except Rome:  
whereby grew, that veruous men began to be as few  
in Europe as in Asia: the which vertue came after to  
the last cast: For as much as all the vertue beyng re-  
duced to Rome, so sone as the same was corrupted, al-  
most all the world came to be corrupted: & the Scithi-  
an people, were able to come to spoile the same Empire,  
the which had extinguished the vertue of other, & knew  
not how to maintaine their owne: and after, although  
through the inundation of those barbarous nations, the  
same Empire was deuided into many partes, this ver-  
tue is not renued: The one cause is, for that it graueth  
them much, to take agayne the orders when they are  
marde, the other, because the maner of liuing now a-  
dayes hauing respect to the Christian Religion, com-  
maundeth not the same necessity to men, to defende  
themselves, which in olde tyme was, for that then,  
the men ouercome in warre, either were killed, or  
remayned perpetuall slaues, where they led their liues  
most miserably: The towne ouercome, either were  
raied, or the inhabiteurs thereof driuen out, their goods  
taken away, sent disperfed through the world: so that  
the vanquisher in warre, suffered all extreme misery:  
of this feare, men being made afrayde, they were  
driuen to keepe liuely the warlike exercises, and they  
honoured such as were excellent in them: But now a-  
dayes, this feare for the most part is not regarded of  
those that are ouercome, few be killed, none is kepte  
long in prison: for that with facilitie, they are set at li-  
bertie: the cities also, which a thousand times haue re-  
belled, are not destroyed, the men whereof, are let alone  
with their goods, so that the greatest hurt that is feared,  
is but a taske: in so much, that men will not submit  
them

themselves to the orders of warre, & to abide alwaies vnder those, to auoid the perills whereof they are litle afraied: againe these Prouinces of Europe, be vnder a verie few heades, in respect as it hath bene in times past: so that all Fraunce, obeie the one king, all Spaine, an other: Italie is a few partes, so that the weake Cities, are defended with leaning to him that ouercometh, and the strong states, for the causes aforesayde, feare no such extreame ruine.

Colimo. Yet there hath bene sene many towne that haue bene sacked within this xvj. yeeres, and lost their dominions, whose insample, ought to teach other how to liue, and to take again some of those olde orders.

Fabritio. You say true: but if you note what towne haue gone to sacke, you shall not finde that they haue bene the heades of states, but of the members: as was sene sacked Torton, and not Milaine: Capua, and not Naples, Brescia, & not Venice, Rauenna, & not Rome: the which ensamples maketh those that gouerne, not to chaunge their purposes, but rather maketh them to stand more in their opinion, to bee able to redeeme again all thinges with taskes, and for this, they wil not submit themselves to the troubles of the exercises of warre, seeming vnto them partly not necessary, partly an intricate matter, which they vnderstand not: Those other, which be subiects to them, whom such ensamples ought to make afraid, haue no power to remedy it: and those Princes, that haue ones lost their states, are no more able, & those which as yet keepe the, know not, nor will not. Because they will without any disease rain by fortune, & not by their vertue, for y in the word being but litle vertue, they see fortune gouerneth all thinges. And they will haue it to rule the, not they to rule it. And to proue this y I haue discoursed to be true, consider Almaine, in the which, because there is many Princesdomes, and common weales, there is much  
vertue

## *The second booke of*

vertue, and all the same, which in the present service of warre is good, dependeth if the ensamples of those people, who being all gelious of their states, fearing seruitude, the which in other places not feared, they all maintaine themselves Lordes, and honourable: this that I haue said, shall suffice to shew the occasions of the present utilitie, according to my opinion: I cannot tell whether it seeme the same vnto you, or whether there be growen in you any doubting.

Colimo. None, but rather I vnderstand all very well: onely I desire tourning to our principall matter, to vnderstand of you, how you would ordeyne the horse with these battailes, and how many, and how they should be governed, and how armed.

Fabritio. You thinke peraduenture, that I haue left it behind: whereat do not maruaile, for that I purpose for two causes, to speake thereof litle, the one is, for that the strength, and the importaunce of an armie, is the footemen, the other is, because this part of service of warre, is lesse corrupted then the same of footemen. For that though it be not stronger then the olde, yet it may compare with the same, neuerthelesse there hath been spoken a litle afoze, of the maner of exercising the. And concerning the arming them, I would arme them as they do at this present, as well the light horsemen, as the men of armes: but the light horsemen, I would that they should be all Crossebowe shooters, with some Warkebuters among them: the which though in the other affaires of warre, they be litle profitable, they be for this most profitable, to make afraied the countrymen, & to driue them from a passage, that were kept of them: because a Warkebutter shall feare them more then. xx. other armed. But conuning to the number, I say, that hauing taken in hand, to imitate the service of warre of the Romanes, I would not ordeine more then. 3. hundred horse, profitable for euery maine battel, of which I would

The arming  
of horsemen.

The weapons  
that light horse  
men should  
haue.

The number  
of horsemen  
requisite a  
maine battaile  
of sixe thou-  
sand men.



would that there were. C. L. men of armes, and C. L. light horsemen, and I would giue to euerie one of these partes, a head, making after among them fiftene peticaptaines for a band, giuing to euerie one of them a Trompet and a standard: I would that euerie ten men of armes, should haue fīue carriages, and euerie tēme light horsemen two, the which as those of the footemen, should carrie the tentes, the vessells, and the axes, and the stakes, and the rest of their other harnesse. For beleue not but that it is disorder, where the men of armes haue to their seruice foure horse, because such a thing is a corrupt ble: for that the men of armes in Almanie, are seene to be with their horse alone, euerie twentie of the hauing onely a carte, that carrieth after them their necessary thinges. The Romane horsemen, were likewise alone: true it is, that the Triarii lodged nere them which were bound to minister helpe vnto them, in the keeping of their horses: the which may easly be imitated of vs, as in the distributing of the lodgings, I shall shew you, the same then that the Romanes did, & that which the Dutchmen doe now adates, we may doe also, yea, not doing it, we erre. These horses ordayned & appointed together with a maine battaile, may sometimes be put together, when the battailes be assembled, and to cause that betwene them be made some sight of assault, the which should be moze to make them acquainted together, then for any other necessitie. But now of this part, there hath bene spoken sufficiently, wherefore let vs fashion the armie, to be able to come into the field against the enemy, and hope to winne it: which thing is the ende, for which the exercise of warre is ordayned, and so much studie therein bestowed.

The number of carriages y men of armes & light horsemen ought to haue.

*The*

# *The third booke of the arte of warre,*

of Nicholas Machiauel, Citizen and Secretarie

of Florence, vnto Laurence

Philip Strozze.

(..)

Cosimo.



Seeing that we chaunge reasoning, I will that the demaunder be chaunged: because I would not be thought presumptuous, the which I haue alwaies blamed in other: therefore, I resigne the Dictatozship, and giue this authoritie to him that will haue it, of these my other friends.

Zanoby. We would be most glad, that you should proceede, but seeing that you will not, yet tell at least, which of vs shall succede in your place.

Cosimo. I will giue this charge to signor Fabricio.

Fabritio. I am content to take it, and I will that we follow the Venecian custome, that is, that the youngest speake first, because this being an exercise for young menne, I perswade my selfe, that young menne, be most apt to reason thereof, as they be most ready to execute it.

Cosimo. Then it falleth to you Luigi: and as I haue pleasure of such a successour, so you shall satisfie your selfe of such a demaunder: therefore I pray you, let vs tourne to the matter, and let vs leaue no more time.

Fabritio. I am certaine, that to minde to shewe well, how an armie is prepared, to fight a fiede, it should be necessarie to declare, how the Grækes, and the Romanes ordeyned the bandes of their armies:

Notwith

withstanding, you your selves being able to reade, and to consider these thinges, by meanes of the auncient writers, I will passe ouer many particulars: and I will onely bring in those thinges, which I thinke necessary to imitate, minding at this time, to giue to our exercise of warre, some part of perfection: The which shall make that in one instant I shall shew you, how an armie is prepared to the field, and how it doth encounter in y<sup>e</sup> verie fight, and how it may be exercised in the fained. The greatest disorder, that they make which ordeine an armie to the field, is in giuing them onely one front, and to bind them to one brunt and to one fortune: the which groweth of hauing lost the way, that the antiquity vsed to receiue one band within an other, because without this way, they can neither succour the foremost, nor defend them, nor succede in the fight in their stode: the which of y<sup>e</sup> Romanes, was most excellently well obserued. Therefore purposing to shew this way, I say, how that the Romanes, deuised into three partes euery Legion; in Hastati, Principi, and Triarii, of which the Hastati were placed in the first front, or foremost of the armie, with the orders thicke and sure, behynd whom were the Principi, but placed with their orders more thinn: after these, they set the Triarii, and with so much thinnesse of orders, that they might, if neede were, receiue betwene them the Principi, and the Hastati. They had besides these, the Slingers, and Crossebowshooters, & the other light armed, the which stode not in these orders, but they placed them in the head of the armie, betwene the horses and the other bandes of footemen: therefore these light armed, began the fight, if they overcame (which happened sel dome times) they followed the victory: if they were repulced, they retired by the flanks of the armie, or by the spaces ordained for such purposes, and they brought themselves among the vnarmed: after the departure of

The greatest disorder that is vsed now a daies in pitching of a field.

The order how a Roman Legion was appointed to fight.



## The third Booke of

whom, the Vassati incountered with the enemy, the which if they saw themselves to be overcome, they re-  
tyred by a litle, and litle, by the rarenes of thorders be-  
twene the Principi, and together with those they re-  
newed the fight: if these also were repulced, they retired  
all in the rarenes of the orders of the Triarii, & altoge-  
ther on a heape began againe the fight: and then if they  
were overcome, there was no more remedy, because  
there remained no more wayes to renewe them againe.  
The horses stode on the corners of the armie, to the  
likenesse of two wings to a body, & some whiles, they  
fought with y enemies horses, an other while they res-  
cued the footmen, according as neede required. This  
way of renewing theselues three times, is almost impossi-  
ble to overcome: for that fortune must three times for-  
sake thee, & the enemy to haue so much strength, y three  
tymes he may overcome thee. The Grekes had not in  
their Falangi, this manner of renewing themselves, and  
although in those were many heads, & many orders, not-  
withstanding, they made one body, or els one head: the  
maner that they kept in rescuing the one the other, was  
not to retire the one order within the other, as the Ro-  
manes, but to enter the one man into the place of the  
other: the which they did in this maner. Their Falan-  
gi brought into ranks, & admit that they put in a ranke  
fiftie men comming after with their head against the  
enemy, of all the ranks the foremost sixe, mighte  
fight: Because their Launces, the which they called  
Sarrisse, were so long, that the sixte ranke passed with  
the head of their Launces, out the first ranke: then  
in fighting, if any of the first, either through death,  
or through woundes fell, straight way they entered  
into his place, the same man, that was behynd in the  
second ranke, and in the place that remained voyde of  
the second, the same man entred, which was behinde  
him in the thirde, and thus successiue, in a sodayne  
the

The maner y  
the Grekes  
vsed in their  
Falangi, when  
they fought  
against their  
enemies.

the rankes behinde, restored the faultes of those afoze, so that the rankes alwayes remained whole, and no place of the fighters was voide, except the last rankes, the which came to consume, hauing not men behynde their backes, whom might restore them: So that the hurt that the first rankes suffered, consumed the last, and the first remained alwayes whole: and thus these Falangi by their order, might soner be consumed, then broken, so that the grosse body, made it more inuincible. The Romanes vsed at the beginning the Falangi: & did set in order their Legions lyke vnto them: after, this order pleased them not, and they deuided the Legions into many bodies, that is, in bandes and companies: Because they iudged (as a little afoze I said) that the same bodie, should haue neede of many Capitaynes, and that it should be made of sundry partes, so that euery one by it selfe, might be gouerned. The maine battayles of the Swizzers, vse at this present, all the maners of the Falangi, as well in ordering it grosse, and whole, as in rescuing the one the other: and in pitching the field, they set the mayne battailes, the one to the sides of the other: and though they set them the one behind the other, they haue no way, that y first retiring it selfe, may be receiued of the second, but they vse this order, to the intent to be able to succour the one y other, wher they put a mayne battaile befoze, & another behind the same on the right hand: so that if the first haue neede of helpe, that then the other may make sozward, & succour it: the third maine battail, they put behinde these, but distant from them, a Harkebus shot: this they do, so that the said two maine battailes being repulced, this may make sozward, and haue space for the selues, & so the repulced, & the same that marcheth sozward, to auoyd the iustling of the one the other: so as much as a grosse multitude, cannot be receiued as a litle body: and therefore, the litle bodies being distinct

The order y  
the Swizzers  
vse in their  
main battails  
whē they fight

## The third Booke of

which were in a Romane Legion, might be placed in such wise, that they might receiue betwene them and rescue the one the other. And to procure this order of the Swizzers not to be so good, as the auncient Romanes, many ensamples of the Romane Legions do declare, when they fought with the Greekes *Falangi*, where alwayes they were consumed of them: for that the kinde of their weapons (as I haue said afore) and this way of renuing themselves, could do more, then the massiu- nesse of the *Falangi*. Hauing therfore with these ensamples to ordeine an armie, I haue thought good partly to retaine the maner of arming & the orders of the Greekes *Falangi*, and partly of the Romane Legions, and therfore I haue sayde, that I would haue in a maine battaile, two thousand pikes, which be the weapons of the *Macedonickall Falangi*: and three thousand *Targaets* with swords, which be the Romane weapons: I haue deuised the maine battaile into x. battailes, as the Romanes their Legions: into x. Cohortes: I haue ordered the *Teliti*, that is y<sup>e</sup> light armed to begin the fight, as the Romanes vsed: and like as the weapons being mingled, do participate of thone and of the other nation, so the orders also do participate: I haue ordainned that euery battaile shall haue v. ranks of *Pikes* in the front, and the rest of *Targaets*, to be able with the front, to withstand the horses, and to enter easily into the battaile of the enemies on fote, hauing in the first front, or backward, *Pikes*, as well as the enemy, the which shall suffice me to withstand them, the *Targaettes* after, to ouercome them. And if you note the vertue of this order, you shall see all these weapons, to do fully their office, for that the pikes be profitable against the horses, & when they come against the footemen, they do their office well, before the fight throung together, because so sone as they presse together, they become vnprofitable: wherefore the  
Swizzers.

How to appoint a main battaile with armour and weapons, and to order the same after the Greeke & Roman maner.



Switzers to auoid this inconuenience, put after euery thre ranks of Pikes, a ranke of Halberdes, the which they do to make roome to the Pikes, which is not yet so much as sufficeth. Then putting our Pikes afoze, and the Targaettes behinde, they come to withstand the hozles, and in the beginning of the fight, they open the rayes, and molest the footemen: But when the fight is thrust together, and that they become vnprofitable, the Targaets and swordes succede, which may in euery narrow place be handled.

Luigi. Wee looke now with desire to vnderstand, how you would ordeyne the armie to fight the felde, with these weapons, and with these order.

Fabricio. And I will not now shew you other, then this: you haue to vnderstand, how that in an ordinarie Romane armie, which they call a Consull armie, there were no more, then two Legions of Romane Citizens which were six hundred hozse, and about aleuen thousand footemen: they had besides as many more footemen and hozsemen, which were sent them from their friendes & consideraters, whom they diuided into two parts, and called the one, the right hozne, & the other the left hozne: nor they neuer permitted, that these aiding footemen, should passe the number of the footemen of their Legions, they were well contented, that the number of those hozse should be more then theirs: with this armie, which was of xxi. thousand footemen, & about two thousand good hozse, a Consul executed all affaires, and went to all enterprises: yet when it was needefull to set against a greater force, two Consulles ioyned together with two armies. You ought also to note in especially, that in al the thre principall actes, which an armie doth, that is, to march, to incampe, and to fight, the Romanes vsed to put their Legions in the midst, so that they would, that the same power, wherein they most trusted, should be most vnited, as in the reasoning of

The number of men y was in a Consulls armie.

How the Romans placed their Legions in the field.

these

## The third Booke of

these three actes, shall be shewed you : those aiding souldiers men, through the practise they had with the Legion Souldiours, were as profitable as they, because they were instructed, according as the souldiours of the Legions were, and therefore, in like maner in pitching the field, they pitched. Then he that knoweth how the Romanes disposed a Legion in their armie, to fight a field, knoweth how they disposed all : therefore, hauing told you how they deuised a Legion into three bandes, and how the one band receiued the other, I haue then told you, how all tharmie in a field, was ordained. Wherefore, I minding to ordain a field like vnto the Romanes, as they had two Legions, I will take .ii. main battailes, & these being disposed, the disposition of all an armie shall be vnderstood thereby : because in ioyning more men, there is no other to be done, then to ingrosse the orders: I thinke I neede not to rehearse how many men a maine battaile hath, & how it hath ten battailes, and what heades bee in a battaile, and what weapons they haue, and which be the ordinarie Pikes and Velitie, and which the extraordinary, so that a litle afoze I told you it distinctly, and I willed you to keepe it in memorie as a necessarie thing to purpose, to vnderstand all the other orders: and therefore I will come to the demonstration of the order, without repating it any more: He thinks good, that the ten battailes of one main battaile be set one the left flanke, and the tenne other, of the other main battaile, on the right: these that are placed on the left flanke, be ordained in this maner, there is put five battailes the one to the side of the other in the front, after such sorte, that betweene the one and the other, there remaine a space of three yardes, which come to occupie for largenesse, C. vi. yardes, of ground, and for length thirtie: behind these five battailes, I would put three other distant by right line from the first, thirtie yardes: two of the which, should come behind

How to order  
an armie in  
a field to fight a  
battaile, ac-  
cording to the  
minde of the  
author.

behind by right line, to the vttermost of the flue, and the other should keepe the space in the middest, and so these three, shall come to occupie for bredth and length, as much space, as the flue doth. But where the flue haue betwene the one, and the other, a distaunce of three yards, these shall haue a distaunce of xxx. yardes. After these, I would place the two last battailes, in like manner behind the three by right line, and distaunt from those three, thirtie yardes, and I would place eche of them, behinde the vttermost part of the three, so that the space, which should remaine betwene the one and the other, should bee lxxiii. yardes: then all these battailes thus ordered, will take in breadth C.vi. yardes, and in length C.L. The extraordinary Pikes, I would destinde a long the flankes of these battailes, on the left side, distaunt from them fiftene yardes, making C.liii. rankes, vii. to a ranke, after such sort, that they may impale with their length, all the left side of the ten battailes in the same wise, declared of mee to be ordained: there shall remaine fourtie rankes to keepe the carriages, and the vnarmed, which ought to remayne in the taile of the armie, distributing the Deticaptaines, and the Centurions, in their places: and of the three Conestables, I would place one in the head, the other in the middest, the third in the last ranke, the which should execute the office of a Vergiductore, whome the antiquitie so called him, that was appointed to the backe of the armie. But retourning to the head of the armie, I say how that I would place nere to the extraordinary Pikes, the Weliti extraordinary, which you know to bee five hundred, and I would giue them a space of xxx. yards: on the side of these likewise on the left hande, I would place the men of armes, and I would they should haue a space of a C.xii. yardes: after these, the light horsemen, to whom I would appointe as much ground to stand in, as the men of armes haue: the or-

How the extraordinary Pikes be placed in the set battaile.

The place where the extraordinary archers & harbutters, and y men of arms & light horsemen ought to stand whe the field is pitched, and goeth to fight y battaile.



## The third Booke of

The ordinarie archers & har-  
kabutters are  
placed about  
their own bat-  
tailes.

The place  
where the ge-  
nerall head of  
a main battaill  
must stand whe  
y same power  
of men is ap-  
pointed to  
fight.

What men a  
generall Cap-  
tain of a main  
battaile ought  
to haue about  
him.

The place  
where a gene-  
rall captain of  
all the armie  
must stand whe  
the battaile is  
readie to be  
fought, and  
what number  
of chosen men  
ought to be a-  
bout him.

dinarie Meliti, I would leaue about their owne bat-  
tailes, who should stand in those spaces, which I ap-  
point betwene the one battaile and the other: whome  
should be as their ministers, if sometime I thought not  
good to place them vnder the extraordinary Pikes: in  
doing or not doing whereof, I would proceede, according  
as should tourne best to my purpose. The generall head  
of all the maine battaile, I would place in y same space  
that wer betwene the first and the second order of the  
battailes, or else in the head, and in the same space, that  
is betwene the last battaile of the first sūe, and the ex-  
traordinary Pikes, according as best should serue my  
purpose, with thirtie or fourtie chosen men about him,  
that knewe by prudence, how to execute a commus-  
sion, and by force, to withstand a violence, and they  
to be also betwene the Drumme and the Ansigne: this  
is the order with the which I would dispose a maine bat-  
taile, which should be the disposing of halfe the armie,  
and it should take in breadth three hundred fourescore &  
two yardes, and in length as much as aboue is said,  
not accounting the space that the same part of the ex-  
traordinary Pikes will take, which must make a de-  
fence for the vnarmed, which will be about .lxxv. yards:  
the other maine battaile, I would dispose on the right  
side, after the same maner iust, as I haue disposed that  
on the left, leauing betwene the one maine battaile &  
the other, a space of .xxii. yardes, in the head of which  
space, I would set some little cariages of artillerie, be-  
hind the which, should stand the generall captaine of  
all the armie, & should haue about him with the Trum-  
pet, and with the Capitaine standerde, two hundred  
men at the least, chosen to bee on fote the most part,  
amongst which there should bee tenne or more, meete  
to execute all commaundementes, and should bee in  
such wise on horsebacke and armed, that they might  
bee on horsebacke, and on fote, according as neede  
should

Should require. The artillerie of the armie suffiseth v. Cannons, for the winning of Townes, whose shotte should not passe fiftie pounce: the which in the fildes should serue me more for defence of the campe, then for to fight the battaile: The other artillerie, should be rather of ten, then of fiftene pounce the shotte: this I would place afore on the front of al the armie, if sometime the countrie should not stande in such wise, that I might place it by the flanke in a sure place, where it might not of the enemy be in daunger: this fashion of an armie thus ordered, may in fighting vse the order of the *Salangi*, and the order of the *Romane Legions*: for that in the front, be pikes, all the men be set in the rankes, after such sort, that incountering with the enemy, and withstanding him, may after the vse of the *Salangi*, restore the first rankes, with those behinde: on the other part, if they be charged so sore, that they be constrained to breake the orders, and to retire themselves, they may enter into the boide places of the second battailes, which they haue behinde them, & vnite their selues with them, and making a new force, withstand the enemy, and ouercome him: and when this sufficeth not, they may in the very same maner, retire themselves the second time, and the third fight: so that in this order, concerning to fight, there is to renewe themselves, both according to the *Greeke* maner, and according to the *Romane*: concerning the strength of the armie, there cannot be ordained a more stronger: for as much as the one & the other horne therof, is exceedingly well replenished, both with heades and weapons, nor there remaineth weake, other then the part behinde of the vnarmed, & the same also, hath the flankes impaled with the extraordinarye Pikes: nor the enemy can not of any part assault it, where he shall not finde it well appointed, and the hinder part cannot be assaulted: Because there cannot bee an enemy, that hath so

*¶ ii.*

How many Canons is requisite for an armie, and of what size they ought to be. When the artillerie ought to be placed where the army is redie to fight.

An armie that were ordered as aboue is declared, may in fighting, vse the *Greeke* maner & the *Roman* fashion.

much

## The third Booke of

To what purpose the spaces that be betwene euery band of men doe serue.

much puissance, whom equally may assault thee on euery syde: for that hee hauing so great a power, thou oughtest not then to match thy selfe in the fildes, with him: but when he were three times more then thou, and as well appointed as thou, hee doth weaken himselfe in assaulting thee in diuers places, one part y<sup>e</sup> thou breakest, will cause all the rest goe to naught: concerning horses, although he chance to haue more then thyne, thou needest not feare: for that the orders of the pikes, which impale thee, defend thee from all violence of them, although thy horses were repulced. The heades besides this, be disposed in such place, that they may easily commaund, and obey: the spaces that be betwene the one battaile, and the other, and betwene the one order, and the other, not onely serue to be able to receiue the one the other, but also to giue place to y<sup>e</sup> messengers, which should goe and come by order of the Captaine. And as I told you first, how the Romanes had for an armie, about foure and twentie thousand men, euen so this ought to bee: and as the other souldiours toke ensample of the Legions, for the maner of fighting, and the fashion of the armie, so those souldiours, which you should ioyne to our two maine battailes, ought to take the forme and order of them: whereof hauing put you an insample, it is an easie matter to imitate it, for that increasing, either two other mayne battailes vnto the armie, or as many other soldiours as they bee, there is no other to bee done, then to double the orders, and where was put tenne battailes on the left part, to put twentie, either ingrossing or distending the orders, according as the place, or the enemye should compell thee.

Luigi. Surely sir I imagine in such wise of this armie, that mee thinkes now I see it, and I burne with a desire to see it incounter, and I would for nothing in the world, that you should become Fabius Maximus,  
inten



intending to keepe the enemy at a baye, and to deferre the day of battaile : because I would say worse of you, then the Romane people sayd of him.

Fabritio. Doubt not : do you not heare the artillery? Our haue already shot, but litle hurt the enemy : and the extraordinary Meliti, issuing out of their places together with the light horsemen, most speedely and with most meruailous furie, and greattest crye that may be, they assault the enemy : whose artillirie hath discharged ones, and hath passed ouer the heads of our footmen, without doing them any hurt, and because it cannot shote the second time, the Meliti, and our horsemen haue now gotten it, and the enemies for to defend it, are come forward, so that neither our ordinaunce, nor the enemies, can any more do their office. See with how much vertue, strength, and agilitie our men fighteth, and with how much knowledge through the exercise, which hath made them to abyde, and by the confidence, that they haue in the armie, the which, see, how with the pace thereof, and with the men of armes on the sides, it marcheth in good order, to giue the charge on the aduersarie : See our artillery, which to giue them place, and to leaue them the space free, is retired by the same space, from whence the Meliti issued : See how the captaine encourageth them, sheweth them the victory certaine : See how the Melitie & light horsemen be enlarged and returned on the flanks of the armie, to seeke and view, if they may by the flanke, do any iniury to the aduersaries : behold how the armies be affronted. See with how much valiantnes they haue withstode the violence of the enemies, and with how much silence, and how the Captaine commaundeth the men of armes, y they sustaine, & not charge, & that they breake not from the order of the footmen: See how our light horsemen be gone to giue the charge on a band of y enemies, Harkebutters, which would haue hurte our

The description of a battail that is a fighting.

## The third booke of

men by flanke, and how the enemies horse haue succoured them, so that tourned betwene the one & the other horse, they cannot shote, but are faine to retire behinde their owne battaile: see with what furie our Pikes do also affront, and how the footemen bee now so nere together the one to the other, that the Pikes can no more be occupied: so that according to the knowledge, learned of vs, our pikes doe retire a litle & a litle betwene the targets. See how in this while a great band of men of armes of the enemies, haue charged our men of armes on the left side, and how ours, according to knowledge bee retired vnder the extraordinarie pikes, and with the helpe of those giuing againe a fresh charge, haue repulced the aduersaries, & slaine a good part of them: in so much, that the ordinary pikes of the first battailes, bee hidden betwene the raies of the Targaets, they hauing left the fight to the Targaet men: whom you may see, with how much vertue, securitie, & leasure, they kill the enemy: see you not how much by fighting, the orders bee thrust together? That they can scarce wield their swords. Behold with how much fury the enemies moue: because being armed with the pike, and with the sword vnprofitable (the one for being too long, the other for finding the enemy too well armed) in part they fall hurt or dead, in part they flee. See they flee on the right corner, they flee also on the left: behold, the victorie is ours. Haue not wee wonne a feld most happily? But with more happinesse it should bee wonne, if it were granted me to put in acte. And see, how there needed not the helpe of the second, nor of the third order for our first front hath sufficed to overcome them: in this part, I haue no other to say vnto you, then to resolute if any doubt be growen you.

Luigi. You haue with so much furie wonne this feld, that I so muche maruaile and am so astonied, that I beleue that I am not able to expresse, if any doubt

doubt remaine in my minde : yet trusting in your prudence, I will be so bold to tell the same that I vnderstand. Tell me first, why made you not your ordinance to shote more then ones : And why straight way you made them to retire into the armie, noz after made no mention of them: we thought also, that you leueled the artillery of the enemye high, and appointed it after your owne deuise : the which might very well be, yet when it should happen, as I beleue it chaunceth often, that they strike the rankes, what remedy haue you: And seeing that I haue begun of the artillerie, I will finish all this question, to the intent I neede not to reason thereof any more. I haue heard many dispraise the armours and the orders of the auncient armies, arguing, how now adayes, they can do litle, but rather should be altogether vnprofitable, hauing respect to the surie of the artillerie: because, this breaketh the orders, and passeth the armours in such wise, that it seemeth vnto them a foolishnesse to make an order, which cannot be kepte, and to take paine to beare harness, that cannot defend a man. Fabritio. This question of yours (because it hath many heades) hath neede of a long aunswere. It is true, that I made not the artillerie to shote more then ones, and also for the same ones, I stood in doubt: the occasion was, for as much as it importeth more, for once to take heed not to be strikē, then it importeth to strike the enemye. You haue to vnderstand, that to purpose that a peece of ordinaunce hurt you not, it is necessary either to stand where it can not reach you, or to get behinde a wall, or behind a banke: other thing there is not that can withhold it: and it is needfull also, that the one and the other be most strong. Those Captaines which come to fight a field, cannot stande behind a wall, or behinde bankes, noz where they may not be reached: therefore it is meete for them, seeing they cannot finde away to defend them, to finde some meane,

Questions  
concerning the  
shooting of ordi-  
nance.

An answer to  
the questions  
that were de-  
maunded, con-  
cerning the sho-  
ting the ordi-  
nance.



## The third booke of

by the which they may be least hurte : nor they can not finde any other way, then to preuent it quickly, the way to preuent it, is to goe to finde it out of hand, and hastily not at leasure and in a heape: for that throught speede, the blow is not suffered to be redoubled, and by the thinnesse, lesse number of menne may be hurt. This, a band of men ordered, can not do: because if the same march hastily, it groweth out of order: if it go scattered the enemy shall haue no paine to breake it, for that it breaketh by it selfe: and therefore, I ordered the armie after such sort, that it might doe the one thing and the other: for as much as hauing set in the corners thereof, a thousand Meliti, I appointed that after that our ordinaunce had shotte, they should issue out together with the light horsemen, to get the enemies artillerie: and therefore, I made not my ordinaunce to shot againe, to the intente, to giue no time to the enemy to shote: Because space could not be giuen to me, and taken from other men, and for the same occasion, where I made my ordenance not to shote the second time, was for that I would not haue suffered the enemy to haue shotte at all, if I had could: seeing that to minde that to the enemies artillerie be vnprofitable, ther is no other remedy, but to assault it speedly: for as much as if the enemies forsake it, thou takest it, if they will defend it, it is requisite that they leaue it behind, so that being possessed of enemies, & of friends, it canot shote. I would beleue, & without insamples these reasons should suffice you, yet being able to shew old ensamples, to proue my sayings true, I will. Ventidio comming to fighte a field with the Parthians, whose strength for the most part, consisted in bowes and arrowes, he suffered them almost to come hard to his campe, before he drew out his armie, the which onely he did, to be able quickly to preuent them: and not to giue them space to shote. Cesar when he was in Fraunce, maketh mention, that

The best remedy to auoid the hurt y<sup>e</sup> the enemy in the field may doe with his ordinaunce.

A policie against bowes and darts.

that in fighting a battaile with the enemies, he was with so much furie assaulted of them, that his men had no time to whoyle their dartes, according to the custome of the Romanes: wherefore it is scene, that to intend, that a thing that shooteth farre of, being in the field, do not hurt thee, there is no other remedy, then with as much celeritie as may be, to prevent it. An other cause moued me to procede, without shooting the ordinaunce, whereat peradventure you will laugh: yet I iudge not that it is to be dispaired. There is nothing that causeth greater confusion in an armie, then to hinder mens sights: wherby many most puissaunt armies haue bene broken, by meanes their sight hath bene lettred, either with dust, or with the smoke: yet there is nothing, that more letteth the sight then the smoke that the artillerie maketh in shooting: therefore, I would thinke that it were more wisdome, to suffer the enemy to blinde himselfe, then to purpose (thou being blind) to go to find him: for this cause, either I would not shote, or (for that this should not be proued, considering the reputacion that the artillerie hath) I would place it on the corners of the armie, so y<sup>e</sup> shooting, it should not with the smoke thereof, blinde the front of the same, which is the importance of my men. And to proue that it is a profitable thing, to let the sight of the enemy, there may be brought for ensample Epaminondas, who to blinde the enemies armie, which came to fight with him, he caused his light horsemen, to runne before the front of the enemies, to raise vp the dust, and to lette their sight, whereby he gotte the victorie. And where it seemeth vnto you, that I haue guided the shotte of the artillerie, after my owne deuise, making it to passe ouer the heades of my men, I am sure you, that most often times, and without comparison, the great ordinaunce misse the footemen; much soner then hitte them: for that the footemen are so lowe, and those so difficult to

Nothing causeth greater confusion in an armie, then to hinder mens sights. Nothing more blindeth the sight of men in an armie, then y<sup>e</sup> smoke of ordinance.

A policie to trouble y<sup>e</sup> enemies sight.

The shot of great ordinance in the field, is not much to be feared of footmen,

## The third Booke of

Because men  
of armes stand  
closer toge-  
ther the light  
horsemen, they  
ought to re-  
maine behind  
the armie, till  
the enemies  
ordinaunce  
haue don sho-  
ting.

shote, that euery litle that thou raysest them, they passe  
ouer the heades of men: and if they be leueled neuer so  
litle to low, they strike in the earth, and the blow com-  
meth not to them: also the vneuenesse of the ground sa-  
ueth the, for that euery litle hillocke, or high place that  
is betwene the men and the ordinaunce, letteth the  
shotte thereof. And concerning horsemen, and in especial-  
lie men of armes, because they ought to stande more  
close together, then the light horsemen, and for that they  
are much higher, may the better be stroken, they may,  
vntill the artillerie haue shotte, bee kepte in the taile of  
the armie. True it is, that the Harkebutters do much  
more hurt, & the field peeces, then the great ordinaunce,  
for the which, the greatest remedy is, to come to hand  
strokes quickly: and if in the first assault, there bee slaine  
some, alwaies there shall bee slaine: but a good Capi-  
taine, and a good armie, ought not to make a compte  
of hurt, that is particular, but of a generall, and to uni-  
tate the Swizzers, whom neuer elschue to fight, being  
made afrayed of the artillerie: but rather punish with  
death those, which for feare thereof, either should go out  
of the ranke, or should make with his body any signe of  
feare. I made the (so sone as they had shotted) to be reti-  
red into the armie, y they might leaue the way free for  
the battaile: I made no more mencion of them, as of a  
thing vnpromisable, the fight being begun. You haue also  
sayd, that considering the violence of this instrument,  
many iudge the armours, and the auncient orders to  
bee to no purpose, and it seemeth by this your talke, that  
menne now adates, haue found orders and armours,  
which are able to defend them against the artillerie:  
if you knowe this, I would be glad that you would  
teach it mee: for that hitherto, I neuer saue any, nor  
I beleue that there can any be found: so that I would  
vnderstand of such menne, for what cause the Soul-  
dours on fote in these dayes, weare the brestplate, or  
the



the corselet of Steele, & they on horsebacke goe al armed : because seeing that they blame the auncient arming of men as vnprofitable, considering the artillerie, they ought to dispise also this : I would vnderstand mozeouer, for what occasion the Swizzers, like vnto the auncient orders, make a battaile close together of sixe or eight thousand men, & for what occasion all other haue imitated them, this order bearing the very same peril, concerning the artillerie, that those other should beare, which should imitate y<sup>e</sup> antiquitie. I beleue they should not know what to answer : but if you should aske such souldiours as had some iudgement, they would answer first, that they goe armed, for that though the same armour defende them not from the artillerie : it defendeth them from crossebowes, from pikes, from swords, from stauies, and from al other hurt, that cometh from the enemies, they would answer also that they went close together like the Swizzers, to be able moze easily to ouerthrow the Footemen, to be able to withstand better the horse, and to giue moze difficultie to the enemye to breake them : so that it is sene that the souldiours haue to feare many other things besides the ordinance : from which thinges with the armours, & with the orders, they are defended. wherof followeth, that the better y<sup>e</sup> an armie is armed, & the closer that it hath the orders, & stronger, so much the surer it is : so that he that is of the same opinion, y<sup>e</sup> you say, it behoueth either that he be of small wisdom, or that in this thing, he hath studied verie litle : for as much as if we see, that so litle a part of the auncient maner of arming, which is vsed now a dayes, that is the pike, and so litle part of those orders, as are the maine battailes of the Swizzers do vs so much good, and cause our armies to be so strong, why ought not wee to beleue, that the other armours, and the other orders which are left, be profitable : Seeing that if we haue

## The third Booke of

The artillerie  
is no let why  
the ancient or-  
ders of war-  
fare ought not  
to be vied in  
these daies.

no regarde to the artillerie, in putting our selues close together, as the Swizzers, what other orders may make vs more to feare the same? For as much as no order can cause vs so much to feare the same, as those which bring men together. Besides this, if the Artillerie of the enemies should not make me afraide, in besieging a Towne, where it hurteth me with more safegarde, being defended of a wall, I being not able to prevent it, but onely with time, with my Artillerie to let it, after such sort that it may double the blowe as it list, why should I feare the same in the field, where I may quickly prevent it? So that I conclude thus, that the Artillerie according to myne opinion, doth not let, that the ancient maners can not be vsed, and to shew the ancient vertue: and if I had not talked already with you of this instrument, I woulde of the same, declare vnto you more at length: but I will remit my selfe to that which then I said.

Luigi. Wee may now vnderstande very wel, how much you haue about the Artillerie discoursed: and in conclusion, me thinkes you haue shewed, that the preventing it quickly, is the greatest remedie that may be had for the same, being in the fiede, and hauing an armie against you. Upon the which there groweth in me a doubt: because me thinkes, that the enemy might place his ordnance in such wise in his armie, that it should hurt you, and shoulde be after such sort garded of the footemen, that it coulde not be prevented. You haue (if you remember your selfe well) in the ordering of your armie to fight, made distances of three yardes, betwene the one battaile and the other, making those distaunces fiftene, which is from the battayles, to the extraordinary pykes: if the enemy should order his armie like vnto yours, and should put the artillerie a good way within those spaces, I beleue that from thence it should hurt you with their most great safegard: because  
men

men cannot enter into y<sup>e</sup> force of their enemies to preuent it. Fabritio. You doubt most prudently, and I will deuise with my selfe, either to resolute you the doubt, or shew you the remedie: I haue tolde you, that continually, these battails either through going, or through fighting are mouing, and alwaies naturally, they come to draw hard together, so that if you make the distances of a small breadth, where you set the artillerie in a litle time they be shot by, after such sort that the artillerie cannot any moze shote: if you make them large, to auoide this perill, you incurre into a greater, where you through those distances, not onely giue commoditie to the enemy, to take from you the artillerie, but to breake you: but you haue to vnderstand, that it is impossible to keepe the artillerie betwene the bands, and in especially those which go on carriages: for that the artillerie goeth one way, and shoteth another way: so that hauing to goe & to shote, it is necessarie, before they shote, that they tourne, & so to tourne them, they will haue so much space, that fiftie cartes of artillerie, would disorder any armie: therfore, it is meete to keepe them out of the bandes, where they may be ouercome in the maner, as a litle afoze we haue shewed: but admit they might be kept, and that there might be found a way betwene both, & of such condicion, that the pressing together of men should not hinder the artillerie, & were not so open that it should giue way to the enemy, I say that it is remedied most easily, with making distances in the armie against it, which may giue free passage to the shotte of those, and so the violence thereof shall come to be vaine, the which may be done most easily: for as much, as the enemy mynding to haue his artillerie stand safe, it behoueth that he put them behinde in the furthest part of the distances, so that y<sup>e</sup> shot of the same, he purposing y<sup>e</sup> they hurt not his own men, ought to passe by right line, and by that very same al-



## The third Booke of

A general rule  
against such  
things as can-  
not be with-  
stode.

waies: & therefore with gining them place, easily they may be auoyded: for that this is a general rule, that to those thinges, which cannot be withstode, there must bee giuen way, as the antiquitie made to the Cliphants, and to the carres full of hookes. I beleue, yea, I am more then certaine, that it seemeth vnto you, y I haue ordered and won a battaile after my owne maner: notwithstanding, I answere vnto you this, when so much as I haue saide hetherto should not suffice, that it should be impossible, that an armie thus ordered, and armed, should not ouercome at the first incounter, any other armie that should be orayned, as they order the armies now a dayes, whom most often times, make not but one front, hauing no Targaets, and are in such wise vnarmed, that they cannot defende them selues from the enemy at hand, and they order them after such sort, that if they set their battailes by flanke, the one to the other, they make the armie thinne: if they put the one behinde the other, hauing no way to receiue the one the other, they do it confusedly, and apt to bee easily troubled: & although they giue iii. names to their armies, & deuide them into three companies, balward, battaile, and rercward, notwithstanding it serueth to no other purpose, then to march, and to distinguish the lodgings: but in the day of battaile, they binde them all to the first byunt, and to the first fortune.

Luigi. I haue noted also in the fighting of your field, how your Horsemen were repulced of the enemies horsemen: for which cause they retyred to the extraordinary Pikes: whereby grew, that with the aide of them, they withstode and draue the enemies backe: I beleue that the Pikes may withstand the horses, as you say, but in a grosse and thicke mayne battaile, as the Suizzers make: but you in your armie haue for the head five rankes of pikes, and for the flanke seuen, so that I cannot tell how they may bee able

able to withstand them.

Fabricio. Yet I haue tolde you, how sixe rankes of Pikes were occupied at ones, in the Macedonicall *Falangis*, albeit you ought to vnderstand, that a manie battaile of *Switzers*, if it were made of a thousand rankes, it cannot occupie more then foure, or at the most five: because the Pikes be sixe yardes and three quarters long, one yard and a halfe quarter, is occupied of the handes, wherefore to the first ranke, there remaineth free five yardes and a halfe, and a halfe quarter of Pike: the second ranke besides that, which is occupied with the hand, consumeth a yard and halfe a quarter in the space, which remaineth betwene the one ranke and the other: so y there is not left of Pike profitable, more then foure yardes and a halfe: to the third ranke, by this very same reason, there remaineth three yardes and a halfe: to the fourth, two yardes a quarter, to the fift one yard & halfe a quarter: the other rankes, soz to hurt, be vnprofitable, but they serue to restore these first rankes, as we haue declared, and to be a fortification to those v. When if five of their rankes can withstand the horse, why cannot five of ours withstande them: to the which also there lacketh not rankes behind, that doth sustayne and make them the very same stay, although they haue no Pikes as the other. And when the rankes of the extraordinary Pikes, which are placed on the flankes, should seme vnto you thinn, they may be brought into a quadrante, and put on the flankes neere the two battailes, which I set in the last company of the army: From the which place, they may easly altogether succour the front, and the backe of the armie, and minister helpe to the horses, according as neede shall require.

Luigi. Would you alwaies vse this forme of order, when you would pitch a fiede?

Fabricio. No, in no wise: soz that you ought to varie the

A battail how great so euer it be, cannot at ones occupy about v. ranks of Pikes.

## The third Booke of

An aduertisement concerning the pitching of a field.

the fashion of the armie, according to the qualitie of the situation, and the condition and quantitie of the enemy, as before this reasoning doe ende, shall be shewed certaine ensamples: but this forme is giuen vnto you, not so much as most strongest of all, where in daede it is very strong, as to the intent that thereby you may take a rule, and an order to learne to know the waies to ordaine the other: for as much, as euery science hath his generalitie, vpon the which a good part of it is grounded. One thing onely I aduise you, that you neuer order an armie, after such sorte, that those that fight afore: cannot be succoured of them, which be set behinde: because he that committeth this error, maketh the greatest part of his armie to be vnpromisable, and if it encounter any strength, it can not overcome.

Luigi. There is growen in mee, vpon this parte a doubt. I haue seene that in the placing of the battailes, you make the front of five on a side, the middest of three, and the last partes of two, and I beleue, that it were better to ordaine them contrariwise: for that I thinke, that an armie should with more difficultie be broken, when he that should charge vpon it, the more that he should enter into the same, so much the stronger he should finde it: and the order deuised of you, mee thinketh maketh, that the more it is entered into, so much the weaker it is found.

Fabritio. If you should remember how to the Triarii, whome were the third order of the Romane Legions, there were not assigned more then six hundred men, you would doubtlesse, hauing vnderstande how they were placed in the last company: For that you should see, how I moued of this ensample, haue placed in the last company two battailes, which are nine hundred men, so that I come rather (following the ensample of the Romane people) to erre, for hauing taken to many, then to fewe: and although this ensample



ple should suffice, I will tell you the reason, the which is this. The first front of the armie, is made perfectly whole and thicke, because it must withstand the brunt of the enemies, and it hath not to receiue in it any of their fellows: and for this, it is fit that it be full of men: because a few men should make it weake, either for thinnesse, or for lacke of sufficient number: but the seconde companie for as much as it must first receiue their friends, to sustaine the enemy, it is meete that it haue great spaces, and for this it behoueth that it be of lesse number then the first: for that if it wer of greater number, or equall, it should be comenient either not to leaue the distaunces, the which should be disordered, or leauing them, to passe the boundes of those afore, the which should make the fashion of the armie vnperfect: & it is not true that you say, that the enemy the more that he entereth into the maine battaile, so much the weaker he findeth it: for that the enemy can neuer fight with the second order, except the first be ioyned with the same: so that he cometh to finde the middest of the maine battaile more stronger, and not more weaker, hauing to fight with the first, and with the second order altogether: the very same happeneth when the enemy should come to the third companie: for that there not with two battailes, which is found fresh, but with all the maine battaile he must fight: and for that this last part hath to receiue most men, the spaces thereof is requisite to be greatest, and that which receiue them, to be the least number.

How the front of the armie ought to be made.

How the middel part of the armie ought to be ordered.

The ordning of the hinder part of y<sup>e</sup> armie.

Luigi. It plealeth mee the same that you haue tolde: but ains were me also this: If the five first battailes do retire betwene the three second battailes, and after the eight betwene the two third, it seemeth not possible, that the eight being brought to gether, and then the tenne together, may be receyued when they be eight, or when they be tenne in the very same space,

D.

which

# The third Booke of

which retained the five.

*Fabritio*. The first thing that I aunſwere is, that it is not the very ſame ſpace: for that y<sup>e</sup> five haue ſoure ſpaces in the middeſt, which retiring betwene three, or betwene the two, they occupie: then there remayneth the ſame ſpace, that is betwene the one maine battaile and the other, and the ſame that is, betwene the battailes, and the extraordinary pikes, all the which ſpaces makes largeneſſe: beſides this, it is to be conſidered, that the battailes keepe other maner of ſpaces, when they be in the orders without being altered, then when they be altered: ſo that in the alteration: either they throng together, or they enlarge the orders: they enlarge them: when they feare ſo much, that they fall to flying: they thruſt them together, when they feare in ſuch wiſe, that they ſeek to ſaue themſelues, not with running away, but with defence: ſo that in this caſe, they ſhould come to be deſtroyed, and not to be enlarged. *Hopewer*, the five ranks of the pikes, that are beſore, ſo ſome as they haue begun the fight, they ought betwene their battailes to retire, into the taile of the armie, ſo to giue place to the Targaet men, that they may fight: and they going into the taile of the army, may do ſuch ſervice as the Captayn ſhould iudge, were good to occupie them about, where in the ſorward, the fight being mingled, they ſhould otherwiſe be altogether vnprofitable. And for this y<sup>e</sup> ſpaces ordayned, come to be for the remnaunt of the men, wide enough to receiue them: yet when theſe ſpaces ſhould not ſuffice, the flankes on the ſides be men, and not walles, whome giuing place, and enlarging themſelues, may make the ſpace to contayne ſo much, that it may be ſufficient to receiue them.

The retire of  
the pikes, to  
place the Tar-  
get men.

*Luigi*. The rankes of the extraordinary pikes, which you place on the flankes of the armie, when the firſt battailes retire into the ſecond, will you haue them

them to stand still, and remaine with two hoymes to the armie: D: will you that they also retire together, with the battailes: The which when they should do, I see not how they can, hauing no battailes behinde with distaunces that may receiue them.

Fabritio. If the enemy overcome them not, when he forceth the battailes to retire, they may stand still in their order, and hurt the enemy on the flanke, after that y first battailes were retired: but if he should also overcome them, as seemeth reason, being so puissant, y he is able to repulse y other, they also ought to retire: which they may do excellently well, although they haue not behinde, any to receiue them: because from the midst, they may redouble by right line, entering the one ranke into the other, in the maner whereof was reasoned when it was spoken of y other of redoubling: true it is, that to minde redoubling to retire backe, it beho- ueth to take an other way, then the same that I shewed you: for that I told you, that the second ranke, ought to enter into the first, the fourth into the third, and so forth: in this case, they ought not to begin before, but behinde, so that redoubling the ranks, they may come to retire backward, not to tourne forward: but to an- swere to all the same, that vpon this foughten field by me shewed, might of you be replied, I say vnto you a- gain, that I haue ordained you this armie, and shewed this foughten field for two causes, the one for to declare vnto you how it is ordered, the other to shew you how it is exercised: the order, I beleeue you vnderstand most wel: and concerning the exercise, I say vnto you, that they ought to be put together in this forme, as often times as may be: for as much as y heads learne ther- by, to keepe their battailes in these orders: for that to particular souldiours, it appertaineth to keepe wel the orders of enery battaile, to the heades of the battailes, it appertaineth to keepe them well in enery order of

How the pikes  
y are placed  
on the flankes  
of the armie:  
ought to go  
uerne them-  
selues whe the  
rest of the ar-  
mie is driuen  
to retire.

The exercise  
of the armie  
in generall.



## The third Booke of

The number  
that is meete  
to be written  
in the Ansigne  
of every band  
of men.

and howe much  
it shal be first  
numbered at the  
beginning of the

The degrees of  
honours in an  
armie, which  
such a man  
ought to rise  
by, as should  
be made a ge-  
nerall Captaine.

the armie; and that they know how to obey, at the  
commandment of the generall Captaine: therefore  
it is convenient that they knowe, how to ioyne the  
one battaile with the other, that they may know how  
to take their place at once: and for this cause it is meet  
that the Ansigne of every battaile haue writte in some  
eident part, the number thereof: as well for to be a-  
ble to commaund them, as also for that the Captaine, &  
the souldiours by the same number, may more easlye  
know them againe: also the maine battailes ought to  
be numbred, and to haue their number in the princi-  
pal Ansigne: Therfore it is requisite, to know of what  
number the maine battaile shall be, that is placed on  
the left, or on the right borne, of what numbers the  
battailes be, that are set in the front, and in the middest,  
and so forth of the other. The antiquitie would also  
that these numbers should be steppes to degrees of ho-  
nours of the armies: as for ensample the first degree  
is the peticaptain, the second the head of fiftie ordinarie  
Meliti, the third the Centurion, the fourth the head of  
the first battaile, the fift of the second, the sixt of the  
third, and so forth, euen to the tenth battaile, the which  
must be honoured in the second place, next the gene-  
rall Captaine of a maine battaile: nor any ought to  
come to the same head, if first he haue not risen by  
all these degrees. And because besides these heads, there  
be three Conestables of the extraordinarye pikes, and  
two of the extraordinarye Meliti, I would that they  
should be in the same degree of the Conestable of the  
first battaile: nor I would not care, that there were  
five men of like degree, to the entent that every one of  
them might strive who should do best, for to be promi-  
sed to be head of the second battaile. Then every one of  
these heads, knowing in what place his battaile ought  
to be set in, of necessitie it must follow, that at a sound  
of the Trumpet, so soone as the head standard shall be  
erected,

erected, all the armie shall be in their places : and this is the first exercise, wherunto an armie ought to be accustomed, that is, to set them quickly together : and to do this, it is requisite euery day, and diuers tymes in one day, to set them in order and to disorder them.

Luigi. What armes would you that the Ansignes of all the armie should haue besides the number :

Fabritio. The Standard of the generall Captaine ought to haue the armes of the Prince of the armie, all the other may haue the very same armes, and to varie with the fieldes, or to varie with the armes, as should seeme best to the Lord of the armie : Because this importeth little, so that the effect grow, y they be knowen the one from the other. But let vs passe to y other exercise : the which is to make them to moue, and with a conuenient pace to march, and to see that marching, they keepe the orders. The thirde exercise is, that they learne to handle themselves in the same maner, which they ought after to handle themselves in the day of battaile, to cause the artillerie to shot, & to be drawen out of the way, to make the extraordinari Veliti to issue out after a likenesse of an assault, to retyre them : To make that the first battailes as though they were soe charged, retyre into the spaces of the second, & after, al into the third, and from thence euery one to retourne to his place : and in such wise to vse them in this exercise, that to euery man al thing may be knowen, & familiar : the which with practise, and with familiaritie, is brought to passe most quicklie. The fourth exercise is, that they learne to know by meane of the sound, and of the Ansigne, the commaundement of their Captaine for as much as that, which shall be to them pronounced by voice, they without other commaundement, may vnderstand : & because the importaunce of this commaundement, ought to growe of the sound, I shall tell you what soundes the antiquitie vled. Of the Lacedemo-

The armes y ought to be in the standard, & in the Ansignes of an armie.

The second & third exercise of an armie.

The fourth exercise of an armie.

## The third booke of

The sounds of  
the instrumēt  
of Musicke, &  
the antiquitie  
vsed in theyr  
armies.

What is signi-  
fied by y<sup>e</sup> sound  
of y<sup>e</sup> Trompet.

nians, according as Tucidido affirmeth, in their armies were vsed flutes: so; that they iudged, that this harmonie was most meete to make their armie to proceede with grauitie, and with furie: the Carthaginians being moued by this verie same reason, in the first assault, vsed the violone. Aharre king of the Libians, vsed in the warre the violone, and the flutes: But Alexander Magnus, & the Romanes, vsed hornes and Trumpets, as they, that thought by ver sue of such instrumentes, to bee able to incourage more the mindes of Souldiours and make them to fight the more lustely: but as wee haue in arming the armie, taken of the Greeke maner, & of the Romane, so in distributing the soundes, we wil keepe the customes of the one, and of the other nation: therefore, nere the generall Captaine, I would make the Trompets (to stande, as a sound not onely apte to inflame the armie, but apt to be heard in all the whole tumulte more then any other sounde: all the other soundes, which should be about the Conestables, and the heads of maine battailes, I would that they should be small drummes, and flutes sounded, not as they sound them now, but as they vse to sound them at feastes. The Captaines then with the Trompet, should shew when they must stand still, and goe forward, or tourne backward, when the artillerie must shote, when the extraordinary Helisi must moue, and with the varietie or distinction of such soundes, to shew vnto the armie all those motions, which generally may be shewed, the which Trompettes should be after followed of the drummes, and in this exercise, because it importeth much, it behoueth much to exercise the armie. Concerning the hoysenmen, there would bee likewise Trompettes, but of a lesse sound, and of a diuers voice from those of the Captaine. This is as much as is come into my remembraunce, about the order of the armie, and of the exercise of the same.

Luigi.



Luigi. I pray you let it not be gréuous vnto you to declare vnto me another thing, that is, for what cause you made the light horsemen, and the extraordinary Uelitie, to go with cries, rumours, and furie, when they gaue the charge? And after in the incountering of the rest of the armie, you shewed, that the thing followed with a most great silence: And for that I vnderstande not the occasion of this varietie, I would desire that you would declare it vnto me.

Fabritio. The opinion of auncient Captaines, hath bene diuers about the coming to handes, whether they ought with rumour to go a pace, or with silence to go faire & softly: this last way, serueth to keepe the order more sure, and to vnderstand, better the commaundements of the Captayn: the first, serueth to incourage more the mindes of men: and for that I beleue, that respect ought to be had to the one, & to the other of these two things, I made the one go with rumour, and the other with silence: nor me thinks not in any wise, that the continuall rumours bee to purpose: because they let the commaundementes, the which is a thing most pernicious: nor it standeth not with reason, y the Romanes vsed, except at the first assault to make rumour: for that in their histories, is seene many times to haue happened, that through the wordes, and comfortinges of the Captayne, the Souldiours that ran away, were made

The cries, and rumours, whē with the first charge is geue vnto the enemies, and the silence y ought to be vsed after, when the fight is once begun.

to stand to it, and in sundry wise by his commaundement, to haue varied the orders, the which should not haue followed, if the rumours had bene louder then his voyce.



# *The fourth booke of the arte of warre,*

of Nicholas Machiauel, Citizen and Secretarie

of Florence, vnto Laurence

Philip Strozze.

(.)

Luigi.



Seeing that vnder my gouernement, a field hath bene won so honourably, I suppose that it is good, that I tempt not fortune any more, knowing how variable, and vnsable she is: and therefore, I desire to giue by my gouernement, & that Zanobi do execute now this office of demanding, minding to followe the order, which concerneth the youngest: and I know he will not refuse this honour, or as we would say, this labour, as well for to do mee pleasure, as also for being naturally of more stomacke then I: nor it shall not make him afrayed, to haue to enter into these trauailes, where he may be as well ouercome, as able to conquere.

Zanobi. I am readie to do what soeuer shall please you to appoint mee, although that I desire more willingly to heare: for as much as hether to, your questions haue satisfied mee more, then those should haue pleased mee which in harkening to your reasoning, hath chaunced to come into my remembraunce. But sir, I beleue that it is good, that you leaue no time, & that you haue patience, if with these our Ceremonies wee trouble you.

Fabritio. . You do me rather pleasure, for that this variation of demaunders, maketh mee to know the sundry

sundrie wittes, and sundrie appetites of yours: But remaineth there any thing, which seemeth vnto you good, to be ioyned to the matter, that all ready hath bene reasoned of?

Zanobi . Two things I desire, before you passe to an other part: the one is, to haue you to shewe, if in ordering armies, there needeth to be vled any other fashio, the other, what respectes a Captayne ought to haue, before he conduct his men to y fight, and in the same any accident rising or growng, what remedy may be had.

Fabritio. I will inforce my selfe to satisfie you, I will not aunswere now distinctly to your questions: for that whilest I shall aunswere to one, many times it will come to passe, that I must aunswere to another, I haue tolde you, how I haue shewed you a fashion of an army, to the intent, that according to the same, there may be giuen all those fashions, that the enemy, & the situation requireth: for as much as in this case, both according to the powre thereof, and according to the enemy, it proceedeth: but note this, that there is not a more perillous fashion; then to distend much the front of the armie, if then thou haue not a most puissant, and most great host: otherwise, thou oughtest to make it rather grosse, and of small largnesse then of much largnesse, and thinne: for when thou hast fewe men in comparison to y enemy, thou oughtest to seeke other remedies, as is to ordaine thine army in such a place, where thou maiest be fortified, either through rivers, or by meanes of fennes, after such sorte, that thou canst not be compassed about, or to inclose thy selfe on the flankes with ditches, as Caesar did in Franco.

You haue to take in this case, this generall rule, to enlarge your selfe, or to draw in your selfe with the front, according to your number, and the same of the enemy. For the enemies being of lesse number, thou oughtest to seeke large places, hauing in especiall ye thy men

To distende much y front of an armie, is most perillous

What is best for a Captaine to doe where his power is much lesse the the enemies power.

A general rule



## The fourth Booke of

well instructed : to the intent thou maiest , not onely compasse about the enimie, but to descend thy orders: for that in places rough and difficulte, being not able to preuaile of thy orders , thou comcest not to haue any aduantage , hereby grewe , that the Romanes almost alwaies , sought the open fieldes , and aduoyded the straightes. To the contrary , as I haue said, thou oughtest to do, if thou hast few men, or ill instructed: for that then thou oughtest to seeke places, either where the litle number may be saued , and where the small experience do not hurt thee: Thou oughtest also to chuse the higher ground , to be able more easely to infect them : notwithstanding, this aduertisement ought to be had, not to ordayne thy army, where the enimie may spie what thou doest, and in place nere to the routes of the same, where the enemies army may come : For that in this case, hauing respect vnto the artillerie, the higher place shall get thee disaduantage : Because that alwaies and commodiously , thou mightest of the enemies artillerye bee hurt , without being able to make any remedy, and thou couldest not commodiously hurt the same , being hindered by thine owne men. Also, he that prepareth an armie to fight a battaile , ought to haue respect, both to the Sunne, and to the Winde, that the one and the other do not hurt the front, for that the one and the other, wil let thee the sight, the one with the beames, and the other with the dust: and moreover , the Winde hindereth the weapons, which are stroken at the enimie, and maketh their blowes more feeble: and concerning the Sunne, it sufficeth not to haue care , that at the first it shine not in the face , but it is requisite to consider , that increasing the day , it hurt thee not : and for this , it should be requisite in ordering the men , to haue it all on the backe , to the intent it should haue to passe much time , to come to lye on the front . This waye was obserued of Aniball at Canus , and of Mario against

The higher ground ought to be chosen. An aduertisement not to place an army where the enimie may see what y same doth.

Respects for the Sunne and Winde.

against the Cimbrians. If thou happen to be much inferior of horses, ordayne thyne armie amongst vines, and trees, and like impedimentes, as in our tyme the Spaniards did, when they ouerthrew the Frenchmen at Cirignuola. And it hath bene seene many tymes with all one Shoulbours, varying onely the order, and the place, that they haue become of losers victors, as it happened to the Carthageners, whom hauing bin ouercome of Marcus Regulus diuers tymes, were after by the counsell of Santippo, a Lacedemonian victorious: whom made them to goe downe into the plaine, where by vertue of the horses, and of Elephantes, they were able to ouercome the Romanes. It seemes vnto mee, according to the auncient insamples, that almost all the excellent Captaines, when they haue knowen, that the enemy hath made stronge one side of his battaile, they haue not set against it, the most strongest part, but the most weakest, and the other most strongest, they haue set against the most weakest: after in the beginning the fight, they haue commaunded to their strongest part, that onely they sustaine the enemy, and not to preace vpon him, & to the weaker, that they suffer themselves to be ouercome, and to retire into the hindermost bands of the armie. This breedeth two great disorders to the enemy: the first, that he findeth his strongest part compassed aboute, the second is, that seeming vnto him to haue the victorie, seldom tymes it happeneth, that they disorder not themselves, whereof groweth his sodayne losse. Cornelius Scipio being in Spaine, against Asdrubal of Carthage, and vnderstanding how to Asdrubal it was knowen, that hee in the ordering the armie, placed his Legions in the midst, the which was the strongest part of his armie, and for this how Asdrubal with lyke order ought to proceede: after when he came to fight the battaile, hee chaunged order, and put his Legions on the hornes of the armie,

The varying of order and place, may cause the conquered to become victorious.

A policie in y<sup>e</sup> ording of me<sup>n</sup> and pitching of a field.

## The fourth Booke of

and in the middest, placed all his weakest men: then coming to the handes, in a sodaine those men placed in the middest, he made to march softly, and the hoznes of the armie, with celeritie to make forward, so that onely the hoznes of both the armies fought, and the bands in the middest, though being distaunt the one from the other, ioyned not together, and thus the strongest part of Scipio, came to fight with the weakest of Asdrubal, and ouercame him. The which way was then profitable, but now hauing respect to the artillerie, it cannot be vsed: because the same space, which should remaine in the middest, betwene the one armie and the other, should giue tyme to the same to shote: The which is most pernicious, as aboue is saide: Therefore it is requisite to lay this way aside, and to vse, as a litle afore we said, making all the armie to incounter, & the weakest part to giue place. When a Captaine perceiueth, that he hath a greater army then his enemy, minding to compasse him about, before he be aware, let him ordayne his front equall, to the same of his aduersaries; after, so soone as the fight is begun, let him make his front by a litle & litle to retire, and the flankes to descend, & alwayes it shall happen, that the enemy shall finde him selfe, before he be aware compassed about. When a captaine will fight, as it were sure not to be broken, let him ordaine his armie in plate, where he hath refuge nere, & safe, either betwene fences or betwene hilles, or by some strong Citie: for in this case, he cannot be followed of the enemy, where the enemy may be pursued of him: this point was vsed of Anibal, when fortune began to become his aduersarie, and that he doubted of the valiantnes of Marcello. Some to trouble the orders of the enemy, haue commaunded those that were light armed, to begin the fight, and that being begun, to retire betwene the orders: and when the armies were after buckled together, and that the fronte

of

How to compasse about your enemies power.

How a Captaine may fight & be as it were sure, not to be ouercome.

How to trouble the orders of the enemy.



of either of them were occuppyed in fighting, they haue made them to issue out by the flankes of the battaile, and the same haue troubled and broken. If any perceiue himselfe to be inferiour of horse, he may besides the wayes that are already shewed, place behinde his horsemen a battaile of Pikes, and in fighting take order, that they giue way to the Pikes, and he shall remain allwayes superiour. Many haue accustomed to vse certaine footemen light armed, to fight among horsemen, the which hath bene to the chivalrie most great helpe. Of all those, which haue prepared armies to the fielde, bee most praised Hanibal and Scipio, when they fought in Affricke: and for that Hanibal had his armie made of Carthaginers, and of strangers of diuers nations, he placed in the first front therof 80. Elephants, after he placed the strangers, behinde, whom he set his Carthaginers, in the hindermost place. he put the Italians, in whom he trusted litle: the which thing he ordained so, for that the strangers hauing befoze them the enemye, & behinde being inclosed of his men, could not flye: so that being constrained to fight, they should overcome: or wearie the Romanes, supposing after with his fresh and valiant men, to be then able easily to overcome the Romanes being wearied. Against this order, Scipio set the Astati, the Præncipi, & the Triarii, in the accustomed maner, to be able to receiue the one the other, and to rescue the one the other: he made the front of the armie, full of boyd spaces, and because it should not be perceiued, but rather should seeme vni- ted, he filled them full of Veliti, to whom he commaunded, that so soone as the Elephantes came, they should a- noide, and by the ordinarie spaces, should enter be- twene the Legions, and leaue open the way to the Elephantes, and so it came to passe, that it made vaine the violence of them, so that comming to hands, he was superiour.

What a Cap-  
taine ought to  
doe when he  
hath not so  
many horse-  
men as y<sup>e</sup> ene-  
mie.

A great ayde  
for horsemen.

The policies  
vse betweene  
Aniball & Sci-  
pio.

## The fourth Booke of

Zanobi. You haue made me to remember, in alledging this battaile, how Scipio in fighting made not Aſtati to retire into the orders of their Pzenci, but hee deuised them, and made them to retire in the hoznes of the armie, to the intent they might giue place to the Pzenci, when he would force forward: therefore I would you should tell me, what occasion moued him not to obserue the accustomed order.

Fabritio. I will tell you. Hanibal had put all the strength of his armie, in the second band: wherefore Scipio for to set against the same like strength, gathered the Pzenci and the Triarii together: So that the distances of the Pzenci, being occupied of the Triarii, there was no place to be able to receive the Aſtati: & therefore he made the Aſtati to deuide, and to goe in y hoznes of the armie, and he drewe them not betwene the Pzenci. But note, that this way of opening the first band, for to giue place to the second, cannot be vsed, but when a man is superiour to his enemy: for that then there is commoditie to be able to do it, as Scipio was able, but being vnder, and repulced, it cannot be done, but with thy manifest ruine: & therefore it is conuenient to haue behinde, orders that may receive thee, but let vs tourne to our reasoning, The ancient Asiaticans, amongst other things deuised of them to hurt y enemies, vsed carts. The which had on y sides certaine hokes, so that not onely they serued to open with their violence y bands, but also to kil with y hooks the aduersaries: against the violence of those, in iii. manners they provided, either they sustained them with the thickness of the rayes, or they received them betwene the bands, as the Elephantes were receined, or els they made with art some strong resistance: as Silla a Roman made against Archelaus, whom had many of these carts, which they called hooked, who for to sustaine them, draue many stakes into the ground, behinde

Carts full of  
hookes made  
to destroy the  
enemies.

The remedie  
y was vsed a-  
gainst Carts  
full of hookes.

hinde his first bandes of men, whereby the Cartes being stopped, lost their violence. And the wise manner that Silla vsed against him in ordering the armie, is to be noted: for that he put the Meliti, and the horse behind, and all the heauie armed afoze, leauing many distaunces to be able to sende before those behind, when necessitie required: whereby the fight being begun, with the horsemen, to the which he gaue the way, he got the victorie. To entend to trouble in the fight the enemies armie, it is conuenient to make something to grow, that may make them afraied, either with shooting of newe helpe that commeth, or with showing thunges which may represent a terrour vnto them: after such sort, that the enemies beguiled of that sight, may bee afraied, and being made afraied, they may easlye be ouercome: the which waies Minutio Rufo vsed, and Accilio Glabrione, Consuls of Rome. Caius Sulpitius also set a great many of Sackes vppon Hules, and other beastes vnprofitable for the warre, but in such wise ordayned, that they seemed men of armes, and he commaunded, that they should appeare vppon a Hyl, while he were a fighting with the Frenchmen, whereby grewe his victorie. The very same did Marius when he fought against the Dutchemen. Then the sayned assaultes auayling much, whilest the fight continueth, it is conuenient that the very assaultes in deede do helpe much, inesppecially if at vnwares in the midst of the fight the enemy might bee assaulted behind, or on the side: the which hardly may be done if the countrie helpe thee not: for that when it is open, part of thy men cannot be hidde, as is meete to be done in like enterprises: but in wooddie or hyllic places, and for this apte for ambushes, part of thy men may be well hidden, to be able in a sodaine, & contrary to y enemies opinion to assault him, which thing alwaies shall be occasion to giue thee the victorie. It hath bene sometimes

The strange manner that Silla vsed in ordering his army against Archelaus.

How to trouble in the fight y armie of the enemies.

A policie of Caius Sulpicius, to make his enemies afraid

A policie of Marius against y Dutchmen.



## The fourth Booke of

A policie of  
great impor-  
tance, while a  
battaile is a  
fighting.

How horseme  
may be disor-  
dered.

How y Turke  
gaue y Sophie  
an ouerthrow.

How the Spa-  
niards over-  
came y armie  
of Amilcare.

How to traine  
the enemy, to  
his destructio.

A policie of  
Tullo Hostilio  
& Lucus Silla  
in dessembling  
of a mischace.

time of great importaunce, whilest the fight continueth  
to solv voices, which doe pronounce the Captaine of  
the enemies to be dead, or to haue overcome on the o-  
ther side of the armie: the which many times to them  
that haue used it, hath giuen the victorie. The chi-  
ualrie of the enemies may be easely troubled, either  
with sightes, or with rumours, not used: as Creso  
did, whom putte Camelles against the hozes of the  
aduersaries, and Pirrus set against the Romayne  
horsemen Cliphantes, the sight of which troubled & dis-  
ordered them. In our time, the Turcke discomfited the  
Sophi in Persia, and the Souldane in Surria with no o-  
ther, then with the noise of Harkabuses, the which in  
such wise, with their straunge rumours, disturbed the  
hozses of those, that the Turcke might easely overcome  
them: The Spaniards to overcome the armie of A-  
milcare, put in the first front Cartes full of Tow, dra-  
wen of oren, and coming to handes, they kindeled fire  
to the same, wherfoze the oren to flie from the fire,  
thrust into the armie of Amilcar, and opened it.  
They are wont (as we haue said) to beguile the ene-  
mie in the fight, drawing him into their ambushes,  
where the Countrie is commodious for the same pur-  
pose, but where it were open and large, many haue used  
to make ditches, and after haue couered them light-  
ly with bowes and yearth, & lefte certaine spaces whole  
to be able betwæne those to retire: after, so sone as the  
fight hath bene begun, retiring by those, and the enemy  
following them, hath fallen in the pities. If in the fight  
there happen the, any accident that may feare thy soul-  
diours, it is a most prudent thing, to know how to des-  
semble it, and to pruert it to good, as Tullo Hostilio  
did, and Lucius Silla: whom seeing while they fought,  
how a part of his men were gone to the enemies side,  
and how the same thing had very much made afrayed  
his men, he made straight way throughout all the ar-  
mie

armie to be understood, how all thinge proceeded, according to his order: the which not onely did not trouble the army, but it increased in them so much stomacke, that he remayned victorious. It happened also to Silla, that hauing sent certayne souldiours to do some businessse, and they being slaine he saide, to the intent his armie should not be made afraied thereby, that he had with craft sent them into the handes of the enemies, for that he had found them nothing faithfull. Sertorius fighting a battaile in Spaine, slue one, whome he signified vnto him the death of one of his Captaynes, for feare that telling the very same to other, he should make the afraied. It is a most difficult thing, an army being now moued to flye, to staie it, and make it to fight. And you haue to make this distinction: either that it is all moued and then to be impossible to tourne it, or there is moued a part thereof, and then there is some remedye. Many Romane Captaines, with making afore those which fled, haue caused them to stay, making them ashamed of running away, as Lucius Silla did, where already part of his Legions being tourned to fight, driven away by the men of Pythodates, he made afore them with a sword in his hand crying: if any aske you, where you left your Captayne, say, we haue left him in Boeria, where he fighteth. Attillius a Consull set against those that ran away, them that ran not away, made them to understand, that if they would not tourne, they should be slaine of their friends, and of their enemies. Philip of Macedo. understanding how his men feared the Scythian souldiours, placed behind his armie, certaine of his most trustie horsemen, and gaue commission to them, that they should kill whome soeuer fled, wherefore, his men mending rather to dye fighting, then flying, ouercame. Many Romanes, not so much to stay a fight, as for to giue occasion to their men, to make greater force, haue whilest they haue fought, taken

Sertorius slue a man for telling him of the death of one of his Captaines.

How certaine captains haue staied their men that hath bene running away.

Attillius constrained his men that ran away to turne againe and to fight.

How Philip king of Macedonia made his men afraid to run away.

## The fourth Booke of

Victory ought  
with all celerity  
to be followed  
wed

What a Captaine  
ought to do, when he  
should chance  
to receue an  
ouerthrow.

How Marcius  
ouercame the  
armie of the  
Carthagin.

ken an Ansigne out of their owne mens handes, & thowen it amongst the enemies, and appointed rewarde to him that could get it againe. I doe not beleue that it is out of purpose, to ioine to this reasoning those things which chaunce after the fight, in especially being brieft things, and not to be left behinde, and to this reasoning comfortable inough. Therefore I say, how the field is lost, or else wonne: when it is wonne, the victorie ought with all celerity to be followed, and in this case to imitate Caesar, and not Annibal, whome staying after that he had discomfited the Romaine at Canne, lost the empire of Rome: The other neuer rested after the victorie, but followed the enemy being broken: with greater violence and furie, then when he assaulted him whole: but when a Captaine doth leese, hee ought to see, if of the losse ther may grow any vtilitie vnto him, in especially if there remayne any residue of the army. The commoditie may growe of the small aduertisement of the enemy, whom must often times after the victorie, becommeth negligent, and giueth thee occasion to oppresse him, as Marcius a Romaine oppressed the armie of the Carthaginiers, whome hauing slain the two Scipions, and broken their armie, not esteeming the same remnant of men, which with Marcius remained a liue, were of him assaulted and ouerthrowen: for that it is sene, that there is nothing so much to be brought to passe, as the same which the enemy thinketh that thou canst not attempt, because for the most parte, men be hurt most, where they doubt least: therefore a Captaine ought when hee cannot doe this, to deuise at least with diligence, that the losse be lesse hurtfull: to doe this, it is necessary for thee to vse meanes, that the enemy may not easily follow thee, or to giue him occasion to make delaye: in the first case, some after they haue bene sure to leese, haue taken order with their heads, that in diuers parts, and by diuers wayes they should flye, hauing appointed



pointed where they should after assemble together : the which made, that the enemy (fearing to deuide the army) was faine to let goe safe either all, or the greatest part of them. In the second case, many haue cast befoze the enemy, their dearest things, to the intent that haer taryng about the spoile, might giue them moze leasure to flie. Titus Dimius vled no smal policie to hyde the losse which he had receiued in the fight, for as much as ha- uing fought vntil night, with greate losse of his men, he made in the night to be buried, y greatest part of them, wherefoze in the morning, the enemies seeing so many slaine of theirs, and so few of the Romanes, believing that they had the disaduauntage, ran away. I trust I haue thus confusedly, as I said, satisfied in good part your demaund : in deepe aboute the fashions of the armies, there resteth me to tell you, how some time by some Captaines, it hath bene vled to make them with the front, lyke vnto a wedge, iudging to bee able by such meane, moze easily to open the enemies arme. Against this fashion, they haue vled to make a fashion lyke vnto a paire of spheres, to be able betwixen the same voide place, to receiue that wedge, and to compasse it about, and to fight with it on euery side : wherupon I will that you take this generall rule, that the greatest remedy that is vled against a deuise of the enemy, is to do willingly the same, which he hath deuised that thou shalt do perforce : because that doing it willingly, thou dost it with order, and with thy aduauntage, & his disaduauntage, if thou shouldest do it being inforced, it should be thy vndoing : for the prouing wherof, I care not to rehearse vnto you, certaine things already tolde. The aduersarie maketh the wedge to open thy bandes : if thou goest with them open, thou disorderest him, and he disordereth not thee. Anibal, set the Elephants in the front of his armie, to open with them the armie of Scipio. Scipio went with it open, and it was the

A policie of Titus Dimius to hide a losse, which he receiued in a fight.

A general rule

Anibal.

Scipio.

## The fourth Booke of

Asdrubal.

A Captaine  
ought not to  
fight without  
aduantage, ex-  
cept he be co-  
strained.

How aduantage  
may be taken  
of y enemies,

occasion of his victorie, & of the ruine of him. Asdrubal placed his strongest men in the midst of the front of his armie, to ouerthrow Scipios men: Scipio commaunded, that by themselves they should retire and he broke them: So that like deuises when they are foresene, be the causes of the victorie of him, against whom they bee prepared. There remaineth me also, if I remember my selfe well, to tell you what respectes a Captaine ought to haue, before he lead his men to fight: vpon which I haue to tell you first, how a Captaine ought neuer to fight a battaile, except he haue aduantage, or be constrained. The vantage groweth of the situation, of the order of hauing more, or better men: the necessitie, groweth when thou seest how that not fighting, thou must in any wise leese, as should be for lacking of money, and for this, thy armie to be readie all maner of waies to resolve, where furnishment is ready to assault thee, where the enemy looketh to be ingrossed with new men: in these cases, thou oughtest alwaies to fight, although with thy disaduantage: for that it is much better to attempt fortune, where thee may fauour thee, then not attempting, to see thy certaine ruine: and it is as greivous a fault in this case, in a Captaine not to fight, as to haue had occasion to overcome, and not to haue either knowen it through ignorance, or lest it through wilenes. The aduantages some times the enemy giueth thee, and some times thy prudence: Many in passing Riuers, haue bene broken of their enemy, that hath bene aware thereof, whom hath taried, till the one halfe hath bene of the one side, and the other halfe on the other, and then hath assaulted them, as Caesar did to the Swizzers, where he destroyed the fourth part of them, through being halfe ouer a river.

Some time thy enemy is found wearie, for hauing followed thee too vndiscreetly, so that finding thy selfe fresh and lustie, thou oughtest not to let passe such

an occasion : besides this , if the enemy offer vnto thee in the morning betimes to fight , thou mayest a good while deferre to issue out of thy lodging , and when he hath stood long in armour , & that he hath lost that same first heate, with the which he came , thou mayest then fight with him . This way Scipio and Metellus vsed in Spaine : the one against Asdrubal, the other against Sertorius . If the enemy be minished of power , either for hauing deuided the armie, as the Scipions in Spaine, or for some other occasion , thou oughtest to proue chaunce. The greatest part of prudent Captaines , rather receiue the violence of the enemies , then go with violence to assault them : for that the furie is easily withstood of sure and steady men , and the fury being sustained, conuerteth lightly into vileness : Thus Fabius did against the Hannites, and against the Galles, and was victorious , and his fellow Decius remained. Some fearing the power of their enemies , haue begun the fight a little before night , to the intent that their men chauncing to be overcome, might then by the helpe of the darkenesse thereof, saue themselves . Some hauing knowen , how the enemies armie being taken of certaine superstition, not to fight in such a time , haue chosen the same time to fight, and overcome : the which Cæsar obserued in France, against Ariouistus, and Vespasian in Surrie against the Iewes.

Fury withstood  
conuerteth in  
to vilenesse.

The greatest and most important aduertisement, that a Captaine ought to haue , is to haue about him faithfull men , that are wise and most expert in the warre, with whom he must continually consult, & reason of his men , and of those of the enemies , which is the greater number , which is best armed, or best on horsebacke, or best exercised , which be most apt to suffer necessitie , in whom he trusteth most , either in the footmen, or in the horsemen : after they ought to consider the place where they be, and whether it be more

What maner  
of men a Cap-  
taine ought to  
haue about  
him continu-  
ally, to consult  
with all.



## The fourth booke of

The condicions of y<sup>e</sup> Capitaine of y<sup>e</sup> enemies and of those that are about him is most requisite to be knownen.

A timorous armie is not to be conducted to fight.

How to auoid the fighting of a field.

more to the purpose for the enemy, then for him: which of them hath bestualles most commodious, whether it be good to deferre the battaile, or to fight it: what good might be given him, or taken away by time: for that many times, Souldiours seeing the warre to be delayed, are grieved, and being wearie, in the paine and in the tediousnes thereof, will forsake thee. It importeth above all thing, to know the Capitaine of the enemies, and whom he hath about him, whether he be rash, or politike, whether he be searefull, or hardie: to see how thou maiest trust upon the aiding Souldiours. And above all thing thou oughtest to take heede, not to conduct the armie to fight when it seareth, or when in any wise it mistrusteth of the victorie: for that the greatest signe to lose, is when they beleue not to be able to winne: and therefore in this case thou oughtest to auoid the fighting of the field, either with doing as Fabius Maximus, whom encamping in strong places, gaue no courage to Anibal, to go to finde him, or when thou shouldest think that y<sup>e</sup> enemy also in strong places, would come to finde thee, to depart out of the field, and to deuide the men into the towne, to the intent that tediousnes of winning them, may weary him.

Zanobi. Can not the fighting of the battaile be otherwise auoided, then in deuiding the armie in sundrie partes, and placing the men in Townes?

Fabritio. I beleue that once already, with some of you I haue reasoned, how that he that is in the field, can not auoid to fight the battaile, when he hath an enemy, which will fight with him in any wise, and he hath not but one remedie, and that is, to place himselfe with his armie distant fiftie miles at least, from his aduersarie, to be able betimes to auoid him, when he should goe to finde him. For Fabius Maximus neuer auoided to fight the battaile with Anibal, but he would haue it with his aduantage: and Anibal

Fabius Maximus.

did

did not presume to be able to ouertome him, going to finde him in the places where he incamped: where if he had presupposed, to haue bene able to haue overcome, it had bene conuenient for Fabius, to haue fought the battailes with him, or to haue auoided.

Philip king of Macedonia, the same that was father to Perse, coming to warre with the Romanes, pitched his campe vpon a verie high hill, to the intent not to fight with them: but the Romanes went to finde him on the same hill, and discomfited him. Cingentorige Captayne of the French men, for that he would not fight the field with Caesar, whom contrarie to his opinion, had passed a riuer, got away many milles with his men.

The Venecians in our time, if they would not haue come to haue fought with the French king, they ought not to haue tarped till the French army, had passed the Riuer Addus, but to haue gotten from thence as Cingentorige, where they hauing tarped, knewe not how to take in the passing of the men, the occasion to fighte the battaile, nor to auoid it: For that the French men being nere vnto them, as the Venecians went out of their Campe, assaulted them, and discomfited them: so it is, that the battaile cannot be auoided, when the enemy in any wise will fight, nor let no man alledge Fabius, for that so much in the same case, he did sive the day of battaile, as Aniball. It happeneth many tymes, that thy Souldiours be willing to fight, and thou knowest by h number, and by the situation, or for some other occasion to haue disaduantage, & desirest to make them chaunge from this desire: it happeneth also, that necessitie, or occasion, constraineth thee to fight, and that thy souldiours are euill to be trusted, and finally disposed to fight: where it is necessary in the one case, to make them afraied, and in the other to encourage them: In the first case, when perill waitions sufficeth not, there is no better way, then to giue in pray, a

Philip king of Macedon. overcome by Romans.

How Cingentorige auoided the fighting of the feild with Caesar.

The ignorance of the Venecians.

What is to be done where souldiours desire to fight, contrary to their Captains minde.

part

## The fourth booke of

part of the vnto y<sup>e</sup> enemye, to the intent those that haue, and those that haue not fought, may beleue thee: and it may very well be done with art, the same which to Fabius Maximus happened by chaunce. The army of Fabius (as you know) desired to fight with Anibals army: the very same desire had the master of his horses to Fabius it seemed not good, to attempt the fight: so that through such contrarie opinions, he was faine to diuide the army: Fabius kept his men in the campe, the other fought, and coming into great perill, had bene ouerthrowen, if Fabius had not rescued him: by the which insample the maister of the horse, together with all the army, knew how it was a wise way to obey Fabius. Concerning to incourage the to fight, it should be well done, to make them to disdain the enemies, shewing how they speake slanderous wordes of them, to declare to haue intelligence with them, and to haue corrupted part of them, to intampe in place, where they may see the enemies, and make some light skirmish with them, so that the thing that is dayly seene, with more facilitie is despised: to shewe them to be vntogether, and with an oration for the purpose, to reprehend them of their cowardnesse, and so to make them ashamed, to tell them that you will fight alone, when they will not beare you company. And you ought aboue all thing to haue this aduertisement, minding to make the souldiour obstinate to fight, not to permit, that they may send home any of their substance, or to leaue it in any place, till the warre be ended, that they may vnderstand, that although flying saue their life, yet it saueueth not them their goddes, the loue whereof, is wont no lesse then the same, to make men obstinate in defence.

How to incourage soldiours.

An aduertisement to make the souldiour most obstinately to fight.

Zanobi. You haue tolde, how the souldiours may be tounred to fight, with speaking to them: doe you meane by this, that all the army must be spoken vnto, or to the heads thereof?

Fabritio



Fabritio, To perswade, or to disswade a thing unto  
 felwe, is very easie, so that if wordes suffice not, you  
 may then vse authoritie and force: but the difficultie  
 is, to remoue from a multitude an euill opinion, & that  
 which is contrary either to the common profit, or to  
 thy opinion, where cannot be vsed but wordes, & which  
 is more they be heard of euerie man, minding to  
 perswade them all. Wherefore, it was requisite that  
 the excellent Captaines were oratours: so that with-  
 out knowing how to speake to all the army, with dif-  
 ficultie may be wrought any good thing: the which al-  
 together in this our time is layed aside. Reade the life of  
 Alexander Magnus, and you shall see how many times  
 it was necessary for him to perswade, and to speake pub-  
 likely to his armye: otherwise he should neuer haue  
 brought them, having become rich, and full of spoile,  
 through the desertes of Arabia, and into India with so  
 much his disease, and trouble: so that infinite times  
 there grow things, whereby an army ruinateth, when  
 the Captayne either knoweth not, or bleseth not to speake  
 unto the same, so that this speaking taketh away feare,  
 discourageth the mindes, increaseth the obstinatenesse  
 to fight, discovereth the deceiptes, promiseth rewardes,  
 sheweth the perills, and the waye to auoide them, re-  
 prehendeth, prayeth, threateneth, filleth full of hope,  
 praise, shame, and doth all those thinges, by the which  
 the humane passions are extincte, or kindled, wherefore  
 that Prince, or common weale, which should appoint  
 to make a new power, and raise reputation to their  
 armye, ought to accustome the Souldiours thereof, to  
 heare the Capitaine to speake, and the Captayne to know  
 how to speake unto them. In keeping despoiled the soul-  
 diours in olde time, to fight for their countrie, the reli-  
 gion auailed much, and the othes which they gaue  
 them, when they led them to warfare: so as much as  
 in all their faultes, they threatened them not onely with

It is requisite  
 for excellent  
 Captains to be  
 good orators.

Alexander Mag-  
 nus vsed open-  
 ly to perswade  
 his army.

The effecte-  
 oulnesse of  
 speaking.

Souldiours  
 ought to be  
 accustomed  
 to heare their  
 captain speake.  
 How in olde  
 time souldiours  
 were threat-  
 ned for their  
 faultes.

## The fourth Booke of

Enterprises  
may y<sup>e</sup> easelie  
be brought to  
passe bi means  
of religion.  
Sertorius.

those punishmentes, which might be feared of men, but with those which of God might be looked for: the which thing mingled with the other religious manners, made many times easie to the auncient Captaines all enterprises, and will do alwaies, where Religion shall bee feared, and obserued. Sertorius preuailed, by declaring that he spake with a Stagge, the which in Gods part, promised him the victorie.

A policie of  
Silla.

Silla sayd, he spoke with an Image, which he had taken out of the temple of Apollo. Many haue told how God hath appeared vnto them in their sleepe, who hath admonished them to fight. In our fathers time, Charles

A policie of  
Charles the  
seuenth king  
of Fraunce,  
against y<sup>e</sup> Eng-  
lishmen.

the seuenth king of Fraunce, in the warre which hee made against the Englishmen, said, hee counsailed with a maide, sent from God, who was called euery where the Damoisell of Fraunce, the which was occasion of his victorie. There may bee also vsed meanes, that

How souldiors  
may be made  
to esteeme li-  
tle their ene-  
mie.

may make thy men to esteeme litle the enemye, as Agesilao a Spartaine vsed, who shewed to his souldiours, certaine Persians naked, to the intent that seeing their delicate members, they should not haue cause to feare them. Some haue constrained their men to fight through necessitie, taking away from them all hope of sauing themselves, sauing in ouercomming. The which is the strongest and best prouision that is made, to purpose to make the Souldiour obstinate to fight, which obstinatenesse is increased by the confidence and loue of the Captaine, or of the countrie. Confidence is caused

The surest  
way to make  
souldiors most  
obstinate to  
fight.

Bi what means  
obstinatenesse  
to fight is in-  
creased.

through the armour, the order, the late victorie, and the opinion of the Captaine. The loue of the countrie is caused of nature that of the Captaine, through vertue more then by any other benefite: the necessities may be many; but that is strongest, which constraineth thee either to overcome, or to die.

The

# The fift booke of the arte of warre,

of Nicholas Machiauel, Citizen and Secretarie

of Florence, ynto Laurence

Philip Strozze

Fabritio



Have shewed you, how an armie is ordayned to fight a field with an other armie, which is sene pitchet against it, and haue declared vnto you, how & same is ouertome; and after many circumstances, I haue likewise shewed you, what diuers chaunces may happen about the same,

so that me thinkes time to shew you now, how an armie is ordered against the same enemye, which otherwise is not sene, but continually feared, that he assault thee. This happeneth when an armie marcheth through the enemies countrey, or through suspected places. First, you must vnderstand, how a Romane armie went alwaies ordinarily afoze, certaine bandes of horsemen, as spies of the way: after followed the right horne, after this, came all the carriages, which to the same appertained; after this, came a Legion, after it, the carriages thereof, after that an other Legion, and next to it, their carriages, after which, came the left horne, with their carriages thereof at their backes, and in the last part, followed the remnant of the chivalrie: this was in effect the manner, with which ordinarily they marched: and if it happened that the armie were assaulted in the way

How the Romanes marched with their armies.



## The fiste Booke of

How the Romanes ordered their army when it happened to be assaulted on the way.

How y<sup>e</sup> maine battails ought to march.

on the front, or on the backe, they made straight way all the cariages to be drawen, either on the right, or on the left side, according as chaunced, or as they could best, having respect to the situation: and all the men together free from their impedimentes, made head on that part where the enemy came. If they were assaulted on the flanke, they drew the cariages towarde the same part that was safe, & of the other, they made head. This way being well and prudently governed, I haue thought meete to imitate, sending afoze the light horsemen, as explozatoours of the countrey: Then having foure maine battailes, I would make them to march in aray, and every one with their cariages following them. And soz that there be two sortes of cariages, that is pertaineing to particuler souldiours, and pertaineing to the publique vse of all the Campe, I would deuide the publique cariages into foure parts, and to every maine battaile, I would appoint his part, deuiding also the artillerie into foure partes, and all the unarmed, so that every number of armed men, should equally haue their impedimentes. But because it happeneth sometimes, that they march through the Countrey, not onely suspected, but so dangerous, that thou fearest every howse to be assaulted, thou art constrained soz to go more sure, to chaunge the forme of marching, and to goe in such wise prepared, that neither the Countreys men, nor any armie may hurt thee, finding thee in any part unprouided.

In such case, the auncient Captaynes were wont to march with the armie quadrante, which so they called this forme, not soz that it was altogether quadrant, but soz that it was apt to fight of foure partes, & they said, that they went prepared, both soz the way, and soz the fight: from which way, I will not digresse, and I will ordaine my two maine battailes, which I haue taken soz to make an armie of, to this effect. Pin-  
ding

ding therefore, to march safely through the enemies  
 Countrie, and to be able to assault him on euery  
 side, when at vnwares the armie might chaunce to be  
 assaulted, and intending therefore, according to the anti-  
 quity, to bring the same into a square, I would devise to  
 make a quadrante, that the rowe thereof should be of  
 space on euery part. C.liv. yares, in this manner. First  
 I would put the flankes, distant the one flanke from  
 the other. C.liv. yares, and I would place five battails  
 for a flanke, in a raye in length, and distant the one frō  
 the other, two yares and a quarter: the which shall  
 occupy with their spaces, euery battaile occupying thir-  
 tie yeades. C.liv. yares. Then betwene the head and  
 the tayle of these two flankes, I would place the other  
 tenne battailes, in euery part five, ordering them after  
 such sorte, that foure should ioyne to the head of the  
 right flanke, and foure to the tayle of the left flanke,  
 leauing betwene euery one of them, a distance of thre  
 yares: one should after ioyne to the heade of the left  
 flanke, & one to the tayle of the right flanke: & so that  
 the space that is betwene the one flanke and the other,  
 is. C.liv. yares, and these battails which are set the one  
 to the side of the other by breadth, & not by length, will  
 come to occupie with y<sup>e</sup> distaunces one hundred yares &  
 a halfe yarde, there shall come betwene them foure bat-  
 tailes, placed in the front on the right flacke, and the  
 one placed in the same on the left, to remayne a space of  
 fiftie and eight yares and a halfe, and the very same  
 space will come to remayne in the battailes, placed in  
 the hinder parte: nor there shall be no difference, sa-  
 uing that the one space shall come on the part behind  
 towarde the right horne, and the other shal come on the  
 part afore towarde the left horne. In the space of  
 the. lviij. yares and a halfe before, I would place all  
 the ordinarie Meliti, in the same behind, the extraor-  
 dinary, which will come to be a thousand for a space,

The ording  
 of an armie  
 after such sort,  
 y<sup>e</sup> it mai march  
 safely through  
 the enemies  
 countrey & be  
 alwaies in a re-  
 dines to fight.

The place in  
 y<sup>e</sup> army where  
 the bowmen  
 & Harkebut-  
 ters are apoin-  
 ted.

## The fift Booke of

and minding to haue the space that ought to be within the armie to be euery way a hundred fiftie and nine yardes; it is meet that the five battailes which are placed in the head, and those which are placed in the taile, occupy not any part of the space which the flankes kepe; and therefore it shall be conuenient, that the five battailes behinde, do not touch with the front, the taile of their flankes, and those afoze, with the taile to touch the head after such sort, that vpon euery corner of the same armie, there may remaine a space to receiue an other battaile; and so that there be foure spaces, I would take foure bandes of the extraordinarie pikes, and in euery corner I would place one, and the two Ansignes of the foresayd pikes, which shall remaine ouerplus, I would set in the midst of the ronne of this armie, in a square battaile, on the head whereof should stand the generall Captaine, with his men about him. And so that these battailes ordained, thus, march all one way, but fight not all one way, in putting them together, those sides ought to be ordayned to fight, which are not defended of the other battailes. And therefore it ought to be considered that the five battailes that be in the front, haue all their other partes defended, except the front: and therefore these ought to be put together in good order, and with the pikes afoze. The five battailes which are behinde, haue all their sides defended, except the part behinde, and therefore those ought to be put together in such wise, that the pikes come behinde, as in the place thereof we shall shew. The five battailes that be in the right flank, haue al their sides defended, except the right flank. The five that be on the left flank, haue all their partes defended, except the left flank: and therefore in ordering the battailes, they ought to be made, that the pikes may turne on the same flank & leeth open: & the Deticaptaines to stand on the head & on the taile, so that nothing to fight, all the

The place in  
an army where the  
extraordinary  
pikes are ap-  
pointed.

The place in  
an army where  
the generall  
Captaine must  
be.



armour and weapons may be in their due places, the way to doe this, is declared where we reasoned of the manner of ordering the battailes. The artillerie I would deuide, and one part I would place without, on the left flank, and the other on the right. The light horsemen I would send afoze to discover the countrie. Of the men of armes, I would place parts behind, on the right hoine, and part on the left, distant about thirtie paces from the battailes: and concerning horse, you haue to take this for a general rule in euery condition, where you ordaine an armie, that alwaies they ought to be put, either behinde, or on the flankes of the same: he that putteth them afoze, ouer against the army, it becometh him to do one of these two thinges, either that he put them so much afoze, that being repulced, they may haue so much space, that may giue them time, to be able to go aside from the footemen, and not to run vpon them, or to order them in such wise, with so many spaces, that the horses by those may enter betwene them, without disordering the. For let no man esteeme little this remembrance, for as much as many Captaynes, whom hauing taken no heed thereof, haue been ruined, and by themselves haue bene disorderd, & broken. The carriages and the armed men are placed in the rowe that remaineth within the army, and in such sorte equally deuided, that they may giue the way easely, to whome so euer would goe either from the one corner to the other, or from the one head, to the other of the army. These battailes without the artillerie and the horse, occupie euery way from the vtter side, two hundred and eleyen paces & a halfe of space: and because this quadrante is made of two maine battailes, it is convenient to distinguish, what part the one maine battail maketh, and what the other: and for that the many battailes are called by the number, & euery of them hath (as you know) tenne battailes and

Where the artillerie must be placed.

The light horsemen must be sent before to discover the country, & the men of armes to come behinde the army. A general rule concerning horse.

Where the carriages and the armed are placed.

## The fift Booke of

and a generall head, I would cause that the first maine battaile, should set the first v. battailes thereof in the front, the other five, in the left flank, and the Captaine of the same should stand in the left corner of the front. The second wayne battaile, should then put the first five battailes thereof, in the right flank, and the other five in the taile, and the head captaine of the same, should stand in the right corner; whom could come to do the office of the Vergiductor. The armie ordained in this manner, ought to be made to moue, & in the marching, to obserue all this order, and without doubt, it is sure from all the tumultes of the countrie men.

For the Captaine ought not to make other prouision, to the tumultary assaults, then to giue sometime Commission to some horse, or Ansigne of Meliti, that they set themselves in order: nor it shall neuer happen that these tumultuous people, will come to finde thee at the drawing of the sword, or Pikes point, for that men out of order, haue feare of those that be in aray: & alwaies it shall be sene, that with cries and rumours, they will make a great assault, without other wise coming nere unto thee, like unto barking curres about a Mastie. Aniball when he came to the hurt of the Romans into Italie, he passed through all Fraunce, and alwayes of the French tumultes, hee took small regard. When going to march, it is conuenient to haue playners & labourers afoze, who may make thee y way playn, which shall be garded of those horsemen, that are sent afoze to view the countrie: an armie in this order may march ten mile the day, and shall haue time ynow to incampe and suppe before Sunne going downe, that ordinarily, an armie may march twentie miles: if it happen that thou be assaulted, of an army set in order, this assaulte cannot grow sodainly: for that an armie in order, cometh with his pace, so that thou mayest haue time inough, to set thy selfe in order to fight the fildes, and

The way must be made plain where the army shall march in order.

How many miles a daye an armie may march in battaile ray to be able to incampe before y Sun set.

and reduce thy men quickly into the same fashion, or like to the same fashion of an armie, which afoze is shewed thee. For that if thou be assaulted, on the part afoze, thou needest not but to cause that the artillerie, that bee on the flankes, and the horse that bee behinde, to come before, and place themselves in those places, and with those distaunces as afoze is declared. The thousande Meliti that be before, must goe out of their place, and be deuided into fise hundred for a part, and goe into their place, betwene the horse and the hornes of the armie: then in the voide place that they shall leaue, the two Ansignes of the extraordinarie Pikes must enter, which I did set in the middest of the quadrant of the armie. The thousand Melitie, which I placed behind, must depart from the same place, and deuide themselves in the flankes of the battailes, to the fortification of those: and by the open place that they shall leaue, all the carryages and vnarmed men must goe out, and place themselves on the backe of the battaile. When the same in the middest being voided, and euerie man gone to his place: the fise battailes which I placed behind on the armie, must make forward in the voyde place, that is betwene the one and the other flanke, and marche towardes the battailes that stand in the head, and three of them must stand within thirie yardes of those, with equall distaunces betwene the one and the other, and the other two shall remaine behinde, distaunt other thirtie yardes: the which fashion may be ordained in a sudden, and cometh almost to be like vnto the first disposition, which of the armie afoze we shewed. And though it come straighter in the front, it cometh grosser in the flankes, which giueth it no lesse strength: but because the fise battailes y be in the taile, haue y Pikes on the hinder part, for the occasion that before we haue declared, it is necessarie to make them to come on the part afoze, aninding to haue them to make a backe

The ordering  
of the army,  
when it is as-  
saulted on the  
vaward.



## The fift Booke of

The ordering  
of the army  
when y enemy  
comes to assault  
it behind.

How the army  
is ordered  
when it is as-  
saulted of any  
of the sides.

to the front of the armie: and therefore it behoueth ei-  
ther to make them to tourne battaile asrer battaile, as  
a whole bodye, or to make them quickly to enter be-  
twene the orders of targettes, and conduct them asoze  
the which way is moze speedye, and of lesse disorder,  
then to make them to tourne all together: and so thou  
oughtest to do by all those, which remaine behinde in  
euerie condition of assaulte, as I shall shew you. If it  
apppeare that the enemy come on the part behinde, the  
first thing that ought to be done, is to cause that euerie  
man tourne his face, where his backe shode, & straight  
way the armie comith to haue made of taile, head, and  
of head taile: then all those wayes ought to be kept, in  
ordering the same front, as I tolde asoze. If the enemy  
come to incounter the right flank, the face of the army  
ought to be made to turne towarde the same side: after  
make all those things in fortification of the same head,  
which aboue is sayd, so y the horsemen, the Welitie, and  
the artillerie, may be in places conformable to the head  
thereof: onely you haue this difference, y in baryng the  
head of those which are trasposed, some haue to goe moze  
& some lesse. In dede making head of the right flank,  
the Weliti ought to enter in the spaces, y be betwene the  
horne of the army, & those horse, which were nearest to  
the left flank, in whose place ought to enter, the two  
Ansignes of y extraordinary Bikes, placed in the mid-  
dest: But first the carriages & the vnarmed, shall go, out  
by the open place, auoiding the rowe in midst, & re-  
tiring themselves behinde the left flank, which shall  
come to be then the taile of the armie: the other Weliti  
that were placed in the taile, according to the principal  
ordering of the armie, in this case, shall not moue: Be-  
cause the same place should not remaine open, which of  
taile shall come to be flank: all other thing ought to  
be done, as in ordering of the first head is sayde: this  
that is told about the making head of the right flank,  
must

must be understood to be told, having made to make it of the left flanke: for that the very same order ought to be obserued. If the enemy should come grosse, and in order to assault thee on two sides, those two sides, which he cometh to assault thee on, ought to be made strong with the other two sides, that are not assaulted, doubling the orders in each of them, and deuyding for both parts the artillerie, the Meliti, and the horse. If he come on three or on foure sides, it is necessary that either thou or he lacke prudence: for that if thou shalt be wise, thou wilt neuer put thy selfe in place, that the enemy on three or foure sides, with a great number of men, and in order, may assault thee: for that minding safely to hurt thee, it is requisite, that hee bee so great, that on euery side he may assault thee, with as many men, as thou hast almost in all thy armie: & if thou be so vnwise, that thou put thy selfe in y danger & force of an enemy, whom hath three times more men ordayned then thou, if thou catch hurt, thou canst blame no man but thy selfe: if it happen not through thy fault, but through some mischaunce, the hurt shall be without the shame, and it shall chaunce vnto thee, as vnto the Scipions in Spaine, and to Asdrubal in Italie: but if the enemy haue not many more men then thou, and intend for to disorder thee, to assault thee on diuers sides, it shall bee his foolishnes, and thy god fortune: for as much as to do so, it is conuenient that he become so thicke in such wise, that then easily thou mayest overthrow one band, and withstand an other, and in short time ruinate him: this manner of ordering an armie against an enemy, which is not feare, but which is feared, is a necessarie and profitable thing, to accoustome thy soldiours, to put themselves together, and to march with such order, and in marching, to order themselves to fight according to the first head, and after to retourne in the fourme, that they marched in, then to

What is to be done whe the army is assaulted on two sides.

## The fift Booke of

make head of the taile, after, of the flankes from these to retourne into the first fashon: the which exercises & vses be necessarie, minding to haue an armie, thoroughly instructed and practised: in which thing the Princes and the Captaines, ought to take paine. For the discipline of warre is no other, then to know how to commaund, and to execute these thinges, For an instructed armie is no other, then an armie that is well practised in these orders: nor it cannot be possible, that who soeuer in this time, should vse like discipline shall euer be broken. And if this quadrant forme which I haue shewed you, is somewhat difficult, such difficultes is necessarie, taking it for an exercise: for as much as knowing well, how to set themselves in order, and to maintaine themselves in the same, they shall know after moze easily, how to stand in those, which should not haue so much difficultie.

Commandements of Captaines being not well vnderstood, may be the destructiō of an armie. Respect y is to be had in commaundements made with the sound of the Trompet.

Zanobi. I beleue as you say, that these orders be verie necessarie, and I for my part, know not what to adde or take from it: true it is, that I desire to know of you two thinges, the one, if when you will make of the taile, or of the flanke, heade, and would make them to tourne, whether this be commaunded by the voice, or with the sound: the other, whether those that you send afoze, to make plaine the way, for the armie to march, ought to be of the verie same souldiours of your battailes, or other vile men appoynted to like exercise. Fabritio. Your first question importeth much: for that many times the commaundementes of Captaines, being not well vnderstode, or euill interpreted, haue disordered their armie: therefore the voices with the which they commaund, in perills ought to be cleare and nete. And if thou commaund with the sound, it is conuenient to make that betwene the one way and the other, there be so much difference, that the one cannot be chaunged for the other: and if thou commaundest  
with



with the voice, thou oughtest to take hēde that thou  
 shouldest the generall voices, and to vse the particulars, and  
 of the particulars, to shew those, which may be interpre-  
 ted sinisterly. Many times the saying backe, backe,  
 hath made to ruinate an armie: Therefore this voice  
 ought not to be vsed, but in steede thereof to vse, re-  
 tire you. If you wil make them to tourne, so to chaunge  
 the head, either to flanke, or to backe, vse neuer to say  
 tourne you, but say to the left, to the right, to the backe,  
 to the front: thus all y other voices ought to be simple  
 and nete, as thrust on, march, stand strong, forwarde,  
 retourne you: and all those thinges, which may be done  
 with the voice, they do, the other is done with the sound.  
 Concerning those men, y must make the wayes plaine  
 for the armie to march, which is your second question,  
 I would cause my owne Soldiours to do this office, as  
 well because in the auncient warfare they did so, as al-  
 so for that there should be in the armie, lesser number  
 of vnarmed men, and lesse impedimentes: and I would  
 chuse out of euery battaile, the same number that  
 should neede, and I would make them to take the instru-  
 mentes, meete to plane the ground withall, and their  
 weapons to cleane with those ranckes, that should bee  
 nearest them, who should carrie them, and the enemye  
 coming, they shall haue no other to doe, then to take  
 them againe, and to retourne into their aray.

In common-  
 demets made  
 with y voice,  
 what respect  
 is to be had.

Of Pianars.

Zanobi. Who shall carrie the instruments to make  
 the way plaine withall?

Fabritio. The cartes that are appoynted to carry the  
 like instrumentes.

Zanobi. I doubt whether you should euer bring these  
 our Soldiours, to labour with shouel or mattocke, af-  
 ter such sort.

Fabritio. All these thinges shall be reasoned in the  
 place thereof, but now I will let alone this part, and  
 reason of the maner of the victualing of the armie: for

## The fift booke of

that mee thinketh, hauing so much trauailed them, it is time to refresh them, and to comfort them with meat. You haue to vnderstand, that a Prince ought to ordaine his armie, as expedite as is possible, and take from the same all those thinges which may cause any trouble or burthen vnto it, and make vnto him any enterprise difficult. Amongest those thinges that causeth most difficultie, it is to be constrained to keepe the armie prouided of wine, and baked bread. The antiquity cared not for wine, for that lacking it, they dranke water mingled with a litle vineger, to give it a taste. For which cause amonge the mimicions of victualles for the host, vineger was one, and not wine. They baked not the bread in Quens, as they vse for Cities, but they prouided the meale, and of the same, euery Souldiour after his owne maner, satisfied himselfe, hauing for condiment Larde and Bacon, which made the bread sauerie, that they made, and maintained them strong, so that the prouision of victuals for the armie was Meale, Vineger, Lard, and Bacon, and for the horses Barley. They had ordinarily heardees of great beastes & small, which followed the armie, the which hauing no neede to be caried, caused not much impediment. Of this order there grew, that an armie in old time, marched sometimes many dayes through solitarie places, and difficulte, without suffering disease of victualles: for that they liued of thinges, which easily they might conuey after them. To the contrary it happeneth in the armies, that are now a dayes, which minding not to lacke wine, and to eate baked bread in the same maner, as when they are at home, whereof being not able to make prouision long, they remaine often times famished, or though they be prouided, it is done with disease, and with most great cost: therefore I would reduce my armie to this maner of living: and I would not that they should eate other bread, then that, which

The victuals  
that the anti-  
quitie made,  
prouision of,  
for their ar-  
mies.

by themselves they should bake. Concerning wine, I would not prohibite the drinking there of, nor yet the conuoying of it unto the armie, but I would not vse indurour, nor any labour for to haue it, and in the other provisions, I would gouerne my selfe altogether, like vnto the antiquitie: the which thing, if you consider well, you shall see how much difficultie is taken away, and how much trouble and disease, an armie and a Captayne is auoided of, and how much commoditie shall be giuen, to what so euer enterprise is to be done.

Zanobi. We haue overcome the enemy in the field, marched after ward vpon his countrey, reason would, that spoiles be made, townes sacked, prisoners taken, therefore I would know, how the antiquitie in these things, gouerned themselves.

Fabritio. Beholde. I will satisfie you. I beleue you haue considered, for that once already with some of you I haue reasoned, how these present warres, impouerish as well those Lordes that overcome, as those that lose: for that if the one lose his estate, the other loseth his money, and his mouables: the which in olde time was not, for that the conquerour of the warre, wared ritche. This groweth of keeping no compte in these dayes of the spoiles, as in olde time they did, but they leaue it to the discretion of the Souldiours. This maner maketh two most great disorders: the one, that which I haue tolde: the other that the Souldiour becommeth more couetous to spoile, and lesse obserueth the orders: and many times it hath bene scene, howe the couetousnesse of the praye, hath made those to lose, whome were victorious.

The occasions why y warres made now a daies, do impouerish the conquerours as well as the conquered.

Therefore the Romanes which were Princes of armies, provided to the one and to the other of these inconueniences, ordaining that all the spoyle should appertaine to the publick, and that the publicke after should bestowe it, as shoulde bee thought good: and

The order y the Romans toke concerning y spoile & the booties that their souldiours got,

there



## The fift booke of

therefore they had in tharmie the questours, who were as we would say, the chamberlaynes, to whose charge all the spoyle and booties were committed: whereof the consul was serued to giue the ordinarie pay to the souldiours, to succour the wounded, and the sicke, and for the other businesse of the armie. The consult might well, and he vsed it often, to graunt a spoile to Souldiours: but this graunting made no disorder: for that the armie being broken, all the pray was put in the middelt, and distributed by head, according to the qualitie of euerie man: the which maner they constituted, to the entent that the Souldiours should attend to ouercome, and not to robbe: the Romane legions ouercame the enemies, & followed them not, for that they neuer departed from their orders: onely there followed them, the horsemen, with those that were light armed, and if there were any other Souldiours then those of the Legions, they likewise pursued the chace. Where if the spoile shoulde haue bene his that got it, it had not bene possible nor reasonable to haue kept the Legions steddie, & to withstande many perills: hereby grew therefore, that the common weale enriched, and euery Consull carryed with his triumphe into the treasure, much treasure, which all was of booties and spoyles. An other thing the antiquitie did vpon good consideration, that of the wages which they gaue to euerie Souldiour, the thirde part they would shoulde be layed by next to him, whom carried the Ansigne of their bande, which neuer gaue it them againe before the warre was ended: this they did, being moued of two reasons, the first was to the entent that the Souldiour should thriue by his wages, because the greatest part of them being young men, and carelesse, the more they haue, so much the more without neede they spende, the other cause was, for that knowing that their mouables were next to the Ansigne, they should be constrained

An order that  
the antiquitie  
tooke, concern-  
ing their sould-  
iours wages.

to haue more care thereof, and with more obstinatenesse to defend it; and this made them strong and to holde together: all which thinges is necessary to obserue, purposing to reduce the exercise of armes vnto the intier perfection thereof.

Zanobi. I beleue that it is not possible, that to an armie that marcheth from place to place, there fall not perillous accidentes; where the industrie of the Captayne is needefull, & the worthynesse of the Souldiours, minding to auoide them. Therefore I would bee glad, that you remembryng any, would shew them.

Fabritio. I shall content you with a good will, being inesppecially necessary, intending to make of this exercise a perfect science. The Captaynes ought aboue all other thinges, whilest they march with an army, to take heede of ambushes, wherein they incurre daunger two waies, either marching thou enterest into them, or thorough craft of the enemye thou art trained in before thou arte aware. In the first case, minding to auoid such perril, it is necessary to send afoze double warde, whom may discouer the countrey, and so much the more diligence ought to be vsed, the more that the countrey is apt for ambushes, as be the wooddie or hilly countries, for that alwaies they be laide either in a wood, or behinde a hill: and as the ambush not foresene, doth ruine thee, so foreseing the same, it cannot hurt thee. Many times by:des or much dust haue discouered the enemye: for that alwaies where the enemye commeth to finde thee, hee shall make great dust, which shall signifie vnto thee his comming: so often times a Captayne seeing in the places where he ought to passe, Doves to rise, or other of those by:des that flye in flockes, and to tourne about and not to light, hath knowen by the same the ambush of the enemies to be there, and sending before his men, and certainly vnderstanding it, hath saued himselfe, and hurte his enemye.

Captains may incurre danger of ambushes two manner of waies.

How to auoid the perill of ambushes.

How ambushes haue ben perceiued.

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concerning the second case, to be trained in, (which these our men call to be drawen to the shot) you ought of take heede, not straight way to beleue those things, which are nothing reasonable, that they be as they seeme: as should be, if the enemy should set afoze thee a praye, thou oughtest to beleue that in the same is y<sup>e</sup> hooke, and that therein is hid the deceipte. If many enemies bee diuery away by a fewe of thine, if a few enemies assaulte many of thine, if the enemies make a sodeine fight, and not standing with reason, alwaies thou oughtest in such cases to feare deceipte, and oughtest neuer to beleue that the enemy knoweth not howe to do his businesse, but rather intending that he may beguile thee the lesse, and minding to stand in lesse perill, the weaker that he is, & the lesse craftier that the enemy is, so much the more thou oughtest to esteeme him: and thou oughtest in this case to vse two sundrie points, for thou must feare him in thy minde and with the order, but with wordes, and with other outward demonstration, to seeme to dispise him: because the laste way maketh that thy souldiours hope the more to haue the victorie: the other maketh thee more warie, & lesse apte to be beguiled. And thou hast to vnderstand, that when men marche through the enemies countrie, they are in much more, and greater perils, then in fighting the feld: and therefore the Captaine in marching, ought to vse double diligence: and the first thing that he ought to doe, is to get described, and painted oute all the countrie, through the which he must march, so that he may know the places, the number, the distances, the waies, the hilles, the riuers, the fennes, and all the qualities of them: and to cause this to be knownen, it is conuenient to haue with him diuersly, & in sundrie maners such men: as knowe the places, and to ask them with diligence, and to see whether their talke agree, and according to the agreeing thereof, to

nota

How the Captain of the enemies ought to be esteemed.

Where men be in greatest perill.

The description of y<sup>e</sup> countrie where an armie must march, is most requisite for a Captaine to haue.



note, he ought also to sende afore the horsemen, and with them prudent heades, not so much to discover the enemy, as to view the countrey, to see whether it agree with the description, and with the knowledge that they haue of the same. Also the guydes that are sente, ought to be kept with hope of reward, and feare of paine. And about all thinges it ought to be provided, that the army know not to what businesse he leadeth them: for that there is nothing in the warre more profitable, then to keepe secret the thinges that is to be done: and to the intent a sodaine assaulte do not trouble thy Souldiours, thou oughtest to see them to stand, ready with their weapons, because the thinges that are provided for, offend lesse. Many for to auoyd the confusion of marching, haue place vnder the standarde, the carriages, and the vnarmed, and haue commaunded them to followe the same, to the intente that in marching needing to stay, or to retire, they might do it more easily, which thing as profitable, I alowe verie much. Also in marching, aduertisement ought to be had, that the one parte of the army go not a sunder from the other, or that through some going fast, and some soft, the army become not slender: the which thinges, bee occasion of disorder: therefore the heades must be placed in such wise, that they may maintaine the pace even, causing to go soft those that go so fast, and to hast forward the other that go to slow, the which pace can not bee better ruled, then by the stroke of the Drumme.

The waies ought to be caused to be enlarged, so that alwaies at least a band of iiii. hundred men may march in the order of the battayle. The custome and the qualitie of the enemy ought to be considered, and whether that he will assaulte thee, either in the morning, or at none, or in the evening, & whether he be more puissant with footemen or horsemen, & according as thou understandest to ordaine & to provide for thy self. But let vs come

*L.ii.*

to

A most profitable thing it is for a Capitaine to be secret in all his affaires.

An aduertisement concerning the marching of an armie.

The marching of an army ought to be ruled by y stroke of the Drum.

The condition of the enemy ought to be considered.

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to some particuler accident. . . It happeneth sometime, that thou getting from the enemie, because thou iudgeth thy selfe inferiour, and therefore minding not to fight with him, and he comming at thy backe, thou arriuest at the bancke of a riuer, passing ouer the which, at keth time, so that the enemie is ready to ouertake thee, and to fight with thee. Some, which chaunsing to be in such perill, haue inclosed their armie on the hinder part with a ditch, and filling the same full of Tow, and firing it, haue then passed with the armie without being able to be lettred of the enemie, he being by the same fire that was betwene them held backe.

Annone of  
Carthage.

Zanobi. I am hard of beliefe, that this fire could stay them, inespéciallie because I remember that I haue heard, how Annone of Carthage, being besieged of enemies, inclosed himselfe on the same part, with woodde, which he did set on fire wher he purposed to make eruption. Wherefore the enemies being not intentiue on the same part to looke to him, he made his armie to passe ouer y same flame, causing euery man to hold his targaet before his face soz to defende them from the fire, and smoke. Fabricio. You say well, but consider you how I haue sayd, and how Annone did: soz as much as I sayde that they made a ditch, and filled it with Tow, so that he that would passe ouer the same, should bee constrained to contend with the ditch and with fire: Annone made the fire without the ditch, and because hee intended to passe ouer it, he made it not great, soz that otherwise without the ditch, it should haue lettred him. Do you not know, that Nabide a Spartan being besieged in Sparta of the Romanes, set fire on part of his Towne to let the way to the Romanes, who already were entered in: And by meane of the same flame not onely hindered their way, but draue them out: but let vs tourne to our matter. Quincus Lurtatius a Romane, hauing at his backe the Cimbr, and coming

ming to a riuer, to thentent the enemy should giue him time to passe ouer, seemed to giue time to them to fight with him: and therefore he fained that he would lodge there, & caused trenches to be made, and certaine pavillions to be erected, and sent certaine horsemen into the Countrey for forredge: so that the Cimbrise beleauing, that he incamped, they also incamped, and deuided themselues into sundrie partes, to prouide for victuals, wherof Luttatius being aware, passed the riuer they being not able to let him. Some for to passe a riuer hauing no bridge, haue deuised it, and one parte they haue tourned behinde their backes, & the other then becomming shallower, with ease they haue passed it: when the riuers be swift, purposing to haue their footemen to passe safely, they place the strongest horses on the higher side, that they may sustaine the water, & on y other part below that may succour the men, if any of the riuer in passing should be ouercome with the water: they passe also riuers that be verie deepe, with bridges, with botes and with barrells: and therefore it is good to haue in a readinesse in an armie wherewith to be able to make all these thinges. It fortuneth sometime that in passing a riuer, the enemy standing against thee on the other bancke, doth let thee: to minde to ouercome this difficultie, I know not a better ensample to folow, then the same of Caesar, whom hauing his armie on the bancke of a riuer in Fraunce, and his passage being letted of Vergintorige a French man, the which on the other side of the riuer had his men, marched many dayes a long the Riuer, and the like did the enemy: wherefore Caesar incamping in a wooddie place, apt to hide men, he tooke out of euery Legion three Cohorts, and made them to tarie in the same place, commaunding them that so soone as hee was departed, they should cast ouer a Bridge, and should fortifie it, and hee with his other men followed on the way: where

Quintus Luttatius policie to passe ouer a Riuer.

How to passe a riuer without a bridge.

How to passe a riuer without a bridge.

A policie of Caesar to passe a riuer, wher his enemy being on the other side thereof sought to let him.

A policie of Caesar to passe a riuer, wher his enemy being on the other side thereof sought to let him.

A policie of Caesar to passe a riuer, wher his enemy being on the other side thereof sought to let him.



## The fift Booke of

foze Vergintorige seeing the number of the Legions, thinking that there was not left any part of them behind, followed also his way: But Cesar when he supposed that the bridge was made, tourned backward, and finding all things in order, passed the river without difficultie.

How to know  
the Foords of  
a river.

Zanobi. What ye any rule to know the foords?  
Fabricio. Yes, we haue alwayes the river, in that part, which is betwene the water, that is stillest, and the water that runneth fastest, there is least depth, and it is a place more mete to be looked on, then any other where. For that alwayes in the same place the river is most shallowest. The which thing because it hath bene proued many times, is most true.

Zanobi. If it chaunce that the river haue made the Ford, so that the horses sincke, what remedie haue you?

How to ef-  
cape out of a  
straight where  
the same is be-  
set with ene-  
mies.

Fabricio. The remedie is to make hardels of rodde which must be placed in the bottom of the river, and so to passe vpon those: but let vs follow our reasoning. If it happen y a Captaine be lead with his armie, betwene two hilles, & that he haue not but two wayes to saue himselfe, either y before, or that behinde, & those being beset of the enemies, he hath for remedie to do the same, which some haue done heretofore, y which haue made on their hinder part a great trench, difficult to passe over, & leamed to the enemy, to mind to kepe him of, for to be able with all his power, without needing to feare behinde to make force that way, which before remained open: y which the enemies believing, haue made themselves strögg towards y ope part, & haue forsaken the inclosed, & he then casting a bidge of wood ouer y trench, for such an effect prepared, both on the same part, with out any impediment hath passed, and also deliuered himselfe out of the handes of the enemy. Lucius Minutius a Consull of Rome, was in Liguria with an

How Lucius  
Minutius ef-  
caped out of  
a straight

armie

armie, and was of the enemies inclosed, betwene certaine hilles, whereby he could not go out: therefore he sent certaine Souldiours of *Numidia* on horsebacke, which he had in his armie: (whome were euill armed, and vpon little leane horses) towarde the places that were kept of the enemies, whom at the first sight made the enemies, to order themselves together, to defende the passing: but after that they saw those men ill appointed, & according to their fashion euill horsed, regarding them little, enlarged the ordiers of their warde, wherof so sone as y<sup>e</sup> *Numidians* were alway, geuing y<sup>e</sup> spurres to their horses, and running violently vpon them passed before they could prouide any remedie, whom being passed, destroyed and spoiled the countrie after such sort that they constrained the enemies, to leane the passage free to the armie of *Lucius*. Some Captaine which hath perceiued himselfe to be assaulted of a great multitude of enemies, hath drawen together his men, and hath gotten to the enemye comoditie, to compasse him all about, and then on the same part: which he hath perceiued to be most weake, hath made force, and by the same waye, hath caused to make way, and saued himselfe.

Wherein he was inclosed of his enemies

How some Captains haue suffred themselves to be compassed about of their enemies.

*Marcus Antonius* retiring before the armie of the *Parthians*, perceiued how the enemies euerie day before Sunne rising, when he removed, assaulted him, and all the waie troubled him, in so much, that he determined not to depart the next day before *Roane*: so that the *Parthians* beleeuing, that he would not remove that day, returned to their tentes. Whereby *Marcus Antonius* might then all the rest of the daye, march without any disquietyesse. This selfe same man for to auoid the arrowes of the *Parthians*, commaunded his men, that when the *Parthians* came towarde them, they should kneele, and that the second ranke of the battailes, should couer with their *Targaettes*, the heddes of the first, the thirde, the second, the fourth

A policie of *Marcus Antonius*.

A defence for the shot of arrowes.

# The fift Booke of

fourth, the third, and so successively, that all the armye  
came, to be as it were under a penthouse, and defen-  
ded from the shotte of the enemies. This is as much  
as is come into my remembrance, to tell you, which  
may happen unto an army marching: therfore,  
if you remember not any thing els,  
will passe to an other part.





*The sixt booke of the arte of warre,*

of Nicholas Machiauel, Citizen and Secretarie

of Florence, vnto Laurence

Philip Strozze

(.)

Zanobi.



Belæue that it is good, seeing the reasoning must be chaunged, that Baptist take his office, and I to resigne mine, and we shall come in this case, to imitate the good Captaynes (according as I haue now here vnderstood of the gentilman) who place the best Souldiours, befoze and behinde the armie, seeming vnto them necessary to haue befoze, such as may lustely begin the fight, and such as behinde may lustely sustaine it. Now seeing Colonus began this reasoning prudently, Baptist prudently shall ende it. And for Luigi and I, haue in this muddiest intertainet, as euery one of vs hath taken his part willingly, I beleue not, that Baptist will refuse it.

Babest. I haue let my selfe be governed hitherto so I minde to do still. Therefore be content sir, to follow your reasoning, and if we interrupt you with this practise of ours, haue vs excused.

Fabritio. You do me, as all ready I haue said, a most great pleasure: for this your interrupting mee, taketh not away my fantasie, but rather refresheth mee. But minding to follow our matter I saye, how that it is now time, that we lodge this our armie, for

that

that

## The sixt Booke of

that you know every thing desireth rest and safety, because to rest, and not to rest safely, is no perfect rest: I doubt much, whether it hath not bene desired of you, that I should first haue lodged them, after made them to march, and last of all to fight, and we haue done the contrary: whereunto necessity hath brought vs, so: that intending to shew, how an armie in going, is reduced from the forme of marching, to the same manner of fighting, it was necessarie to haue first shewed, how they ordered it to fight. But turning to our matter, I say, that minding to haue the campe sure, it is requisite that it be strong, and in good order: the industrie of the

How the Grekes  
incamped.

Captaine, maketh it in order: the situation, or the arte, maketh it strong. The Grekes sought strong situa-

How the Ro-  
mans incam-  
ped.

tions, no: they would neuer place themselves, where had not bene either caue, or bancke of a river, or multitude of trees, or other naturall fortification, that might defend them: but the Romanes not so much incamped safe through the situation, as through arte, no: they would neuer incampe in place, where they should not haue bene able to haue raunged all their bandes of men according to their discipline. Whereby grew, that the Romanes might keepe alwaies one forme of incamping, so: that they would, that the situation should be ruled by them, not they by the situation: the which the Grekes coulde not obserue, so: that being ruled by the situation, and varying the situation and forme, it was conuenient, that also they should vary the maner of incamping, and the fashion of their lodgings. Therefore the Romanes, where the situation lacked strength, they supplied the same with arte, and with industrie. And so: that I in this my declaration, haue willed to imitate the Romanes. I will not depart from the maner of their incamping, yet not obseruing altogether their order, but taking the same parte, which semeth vnto me, to be meete so: this present time. I haue told  
you

you many times, how the Romanes had in their con-  
 full armies, two Legions of Romane men, which  
 were about aleuen thousand footemen, and sixe hun-  
 dred horsemen, and moreouer they had another aleuen  
 thousand footmen, sent from their friendes in their aide:  
 nor in their armie they had neuer more souldiours that  
 were straungers, then Romanes, except horsemen,  
 whom they cared not, though they were more in num-  
 ber then theirs: and in all their doings they did place  
 their Legions in the midst, and the aiders, on y sides  
 the which maner they obserued also in incamping, as  
 by your selfe you may reade, in those authours, that  
 write of their actes: and therefore I purpose not to shew  
 you distinctly how they incamped, but to tell you onely  
 with what order, I at this present would incampe my  
 armie, whereby you shall then know, what part I haue  
 taken out of the Romane maners. You know that in  
 stead of two Romane Legions, I haue taken two  
 maine battaillies of footemen, of sixe thousand footmen,  
 and three hundred horsemen, profitable for a maine bat-  
 taillie, and into what battaillies, into what weapons, into  
 what names I haue deuised them: you know how in  
 ordering the armie to march and to fight, I haue not  
 made mention of other men, but onely haue shewed,  
 how that doubling the men, they needed not but to  
 double the orders: but minding at this present, to  
 shew you the maner of incamping, we thinketh good  
 not to stande onely with two maine battaillies, but to  
 bring together a iust armie, made like vnto the Ro-  
 manes, of two maine battaillies, and of as many more ai-  
 ding men: the which I make, to the intent that the  
 forme of the incamping, may be the more perfect, by  
 lodging a perfect armie: which thing in the other de-  
 monstrations, hath not seemed vnto me so necessary:  
 purposing then, to incampe a iust army of foure & twen-  
 tie thousand footemen, and of two thousand good horse-  
 men,

The maner  
 of the incam-  
 ping of an ar-  
 mie.



## The sixt Booke of

The lodging  
for the gene-  
rall Captain.

men being deuised into foure maine battaills, two of  
our owne men, and two of straungers, I would take  
this way. The situation being found, where I would  
incampe, I would erect the head standard, and about it,  
I would make out a quadrant, which should haue e-  
uery side distant from it 37. yardes and a halfe, of  
which euery one of them should lye, towarde one of  
the foure regions of heauen, as East, West, South, and  
North: between the which space, I would that the Cap-  
taines lodging should be appointed. And because I be-  
lieue that it is wisdom, to deuise the armed from  
the vnarmed, seeing that so for the most part the Ro-  
manes did, I would therefore seperate the men, & were  
cumbered with any thing, from the vncumbered. I  
would lodge all, or the greatest part of the armed, on  
the side towards the East, and the vnarmed, & the cum-  
bered on the West side, making East the head, and West  
the backe of the Campe, and South, and North should  
be the flanks: and so, to distinguish the lodgings of the  
armed, I would take this way. I would draw a line  
from the head standard, and leade it towards the East,  
the space of five hundred ten yardes & halfe: I would  
after, make two other lines, that should place in the  
middlest the same, and should bee as long as that, but  
distant of the of them from it a leuen yardes and a quar-  
ter: in the ende whereof, I would haue the East gate,  
and the space that is betwene the two vttermost lines,  
should make a way, that should goe from the gate, to  
the Captaines lodging, which shall come to bee 22.  
yardes and a halfe broad, and foure hundred 72. yardes  
and a halfe long, for the 37. yardes and a halfe, the  
lodging of the Captaine will take vp: and this shall bee  
called the Captaine way. Then there shall be made  
an other way, from the South gate, to the North gate,  
and shall passe by the head of the Captaine way, and  
leane the Captaines lodging towards the East, which  
way

way shall bee 2 hundred 37. yardes and a halfe long, (for the length therof will be as much as the breadth of all the lodgings) and shall likewise bee 22. yardes and a halfe broad, and shall be called the crosse way. Then so soon as the Captaines lodging were appointed out, and these two wayes, there shalbe begun to be appointed out the lodgings of our owne two maine battaills, one of the which, I would lodge on the right hand of the Captaines way, and the other, on the left: and therfore passing ouer the space, that the breadth of the crosse way taketh, I would place 32. lodgings, on the left side of the Captaine way, and 32. on the right side, leauing betwene the 16. and the 17. lodging, a space of 22. yardes and a halfe, the which should serue for a way ouerthwart, which should runne ouerthwart, throughout all the lodgings of the maine battailes, as in the distributing of them shall be seene.

Of these two orders of lodgings in the beginning of the head, which shall come to ioine to the crosse way, I would lodge the Captaine of the men of armes in the 15. lodgings; which on euery side followeth next, their men of armes, where each maine battaill hauing a hundred 50. men of armes, it will come to tenne men of armes for a lodging. The spaces of the Captaines lodgings, should be in breadth 30. and in length 7. yardes and a halfe. And note that when so euer I say breadth, it signifieth the space of the middest from South to North, and saying length, that which is from West to East. Those of the men of armes should be 11. yardes, and a quarter in length, and 22. yardes and a halfe in breadth. In the other 15. lodgings, that on euery side should follow thee, which should haue their beginning on the other side of the ouerthwart way, and which shall haue the very same space, that those of the men of armes had, I would lodge the light horsemen, whereof being a hundred

The lodgings for the men of armes, & their Captaine.

Note, which is breadth and which length in the square camp.

The lodging for the light horsemen, and their Captaine.

## The sixt booke of

and fiftie, it will come to terme horsemen for a lodging, and in the 16. that remaineth, I would lodge their Captaine, giueing him the very same space, that is giuen to the Captaine of the men of armes: and thus the lodgings of the horsemen of two maine battailles, will come to place in the middelt the Captaine way, and giue rule to the lodgings of the footemen, as I shall declare. You haue noted how I haue lodged the three hundred horsemen of euery maine battaille with their Captaines, in 32. lodgings placed on the Captaine way, hauing begun from the crosse way, and how from the 16. to the 17. there remaineth a space of 22. yarden and a halfe to make a way ouerthwart. Ordering therfore to lodge the twentie battailles, which the two ordinarie maine battailles haue, I would place y lodging of euery two battails, behinde the lodgings of the horsemen, euery one of which, should haue in length 11. yarden and a quarter, & in breadth 22. yarden and a halfe, as those of the horsemens, and should bee ioyned on the hinder part, that they should touch the one the other. And in euery first lodging on euery side which cometh to lie on the crosse way, I would lodge the Conestable of a battaille, which should come to stand euen with the lodging of the Captaine of the men of armes, and this lodging shall haue onely of space for breadth 15. yarden, and for length seven yarden and a halfe. In the other fiftene lodgings that on either side followeth after these, euen vnto the ouerthwart way, I would lodge on euery part a battaille of footemen, which being foure hundred and fiftie, there will come to a lodging 30. the other 15. lodgings, I would place continually on euery side on those of the light horsemen, with the very same spaces; where I would lodge on euery part, an other battaille of footemen, and in the last lodging, I would place on euery parte the Conestable of the battail, which will come.

The lodging  
for the foot-  
men of two  
ordinary main  
battailles.

The lodgings  
for the Con-  
stables.

The number  
of footmen  
appointed to  
euery lodging



come to ioyne with the same of the Captaine of the light horsemen, with the space of vii. yardes and a halfe for length, and xv. for bredeth: and so these two first orders of lodgings, shall be halfe of horsemen, and halfe of footemen. And for that I would (as in the place thereof I haue told you) these horsemenne should be all profitable, and for this hauing no seruantes which in keeping the horses, or in other necessary thinges might helpe them, I would that these footemen, who lodge behind the horse, should be bounde to helpe to prouide, and to keepe them for their maisters: and for this to be exempted from the other doinges of the Campe. The which maner, was obserued of the Romanes. Then leauing after these lodgings on euerie parte, a space of xii. yardes and a halfe, which should make a waye, that should be called the one, the first way on the right hand, and on the other, the first way on the left hand, I would pitch on euerie side an other order of xii. double lodgynges, which should tourne their hinder partes the one against the other with the verie same spaces, as those that I haue tolde you of, and deuided after the sixteenth in the verie same maner for to make the ouerthwart way, where I would lodge on euerie side iiii. battailes of footemen, with their Constables in both endes. Then leauing on euerie side an other space of xii. yardes and a halfe, that should make a way, which should be called of the one side, the second waye on the right hande, and on the other side, the second waye on the left hande, I would place an other order on euerie side of .xii. double lodgynges, with the verie same distance and deuisions, where I would lodge on euerie side other .iiii. battailes with their Constables: and thus the horsemenne and the bandes of the two ordinarie maine battailes, should come to be lodged in thre orders of lodgynges, on the one side of the Captayne waie, and in thre other orders

## *The sixt booke of*

ders of lodgynges on the other side of the Captayne waie . The two aying maine battailes (for that I caused them to be made of the verie same nation ) I would lodge them on euerie part of these two ordinarie maine battailes, with y very same orders of double lodgynges , pitching firste one order of lodgynges, where should lodge halfe the horsemen , and halfe the foote men, distance. xxi. yardes & a halfe from the other, for to make a way which should be called the one, the third way on the righ hande , and the other the thirde way on the left hand . And after , I would make on euerie side , two other orders of lodgynges, in the verie same maner distinguished and ordained , as those were of y ordinarie maine battailes , which shall make two other waies , and they all should be called of the numbze, and of the hand, where they should be placed: in such wise , that all this side of the arme, should come to be lodged in. xii. orders of double lodgynges, and in . xiii. waies, reckning captaine waie , and Crosse waie : I would there should remaine a space from the lodgynges to the Trench of . lxxv. yardes round aboute : and if you reckon all these spaces, you shall see that from y midst of the Captaynes lodging to the east gate , there is. D.x. yardes . Now there remaineth two spaces , whereof one is from the Captaynes lodging to the South gate, the other is from thence to y North gate : which come to bee ( either of them measuring them from the point in the midst ) . CCCC. lxxvi. yardes . Then taking out of euerie one of these spaces xxxvii. yardes and a halfe , which the Captaynes lodging occupieth , and . xxxiii. yardes euerie way for a market place, and . xxi. yardes and a halfe for a way that devides euerie one of the saide spaces in the midst , and . lxxv. yardes, that is left on euerie parte betwene the lodgynges and the Trench , there remaineth on euerie side a space for lodgyngs of . CCC. yardes

yardes broad, and lxxv. yardes long, measuring y length with the space that the Captaynes lodging taketh vp.

Deuiding then in the middelt the said length, there would be made on euerie hand of the Captayne . xl. lodgingses xxxvii. yardes and a halfe long, and xv. broad, which will come to be in all lxxx. lodgingses, wherein shall be lodged the heads of the maïne battailes, the Treasurers, the Marshallles of the fielde, and all those that should haue office in the armie, leauing some void for straungers that should happen to come, and for those that shall serue for good will of the Captayne. On the parte behinde the Captaynes lodging, I would haue away from South to North, xxxiii. yardes large, & should be called the head waye, which shall come to be placed a long by the lxxx. lodgingses aforesayde: for that this way and the crosse way, shall come to place in the middelt betweene them both the Captaynes lodging, and the lxxx. lodgingses that be on the sides thereof.

The lodgings for the chiefe Captaines of the main battailes and for the treasurers, marshalls and strangers.

From this head way, and from ouer against the Captaynes lodging, I would make an other waye, which should goe from thence to the West gate, likewise broade xxii. yardes and a halfe, and should aunswere in situation and in length to the Captayne way, and should be called the market way. These two wayes being made, I would ordeyne the market place, where the market shall be kept, which I would place on the head of the market way ouer against the Captaynes lodging, and ioyned to the head way, and I would haue it to be quadrant, and would assigne lxxxv. yards and three quarters to a square: and on the righte hand and left hande, of the said market place, I would make two orders of lodgingses where euerie order shall haue eight double lodgingses, which shall take vp in length ix. yardes, and in breath two & twentie yardes and a halfe, so that there shall come to be on euery hand of the market place. xvi. lodgingses that shall place the



## The sixte Booke of

Lodgings for  
the horsemen,  
of the extra-  
ordinary main  
battailes.

The lodgings  
for the extra-  
ordinary pikes  
and Velitie.

same in the middlest which shall be in all xxxii. wherein  
I would lodge those horsemen, which should remaine  
to the ayding mayne battailes: and when these should  
not suffice, I would assigne them: some of those lod-  
ginges that placeth betwene them the Captaynes lod-  
ging, and in especially those, that lye towarde the  
Trenche. There resteth now to lodge the Pikes, and  
extraordinarie Velitie, that euerie mayne battayle hath,  
which you knowe according to our order, how euerie  
one hath besides the. battailes a thousande extraordi-  
narie Pikes, and fve C. Veliti: so that the two chiefe  
mayne battailes, haue two, .xx. extraordinarie Pikes,  
and a thousand extraordinary Veliti, and the ayders as  
many as those, so that yet there remaineth to be lodged  
vi. .xx. men, whom I would lodge all on the West side,  
and along the Trenche. Then from the ende of the  
head way, towarde the North, leauing the space of lxxv.  
yardes from them to the Trench, I would place an  
order of fve double lodgings, which in all should take  
up lvi. yardes in length, and xxx. in breadth: so that the  
breadth deuided, ther will come to euerie lodging a leuen  
yardes and a quarter for length, and for breadth two  
and twentie yardes and a halfe. And because there  
shall be tenne lodgings, I will lodge thre hundred  
men, appointing to euerie lodging thirtie men: lea-  
uing then a space of thre and twente yardes and a  
quarter, I would place in like wise, and with like spa-  
ces an other order of fve double lodgings, and agayne  
an other, till there were fve orders of fve double lod-  
ginges: which will come to be fiftie lodgings placed by  
right line on the North side, euerie one of them distant  
from the Trenche. lxxv. yardes, which will lodge fiftie  
hundred men. Tournig after on the left hande  
towarde the West gate, I would pitch in all the same  
fracte, which were from them to the sayde gate, fve  
other orders of double lodgings, with the very same  
spaces

spaces, and with the verie same maner : true it is, that from the one order to the other, there shall not be moze then aleuen yardes and a quarter of space : wherein shall be lodged also fiftene hundred men : and thus from the North gate to the West, as the Trench tourneth, in a hundred lodgings deuided in tenne reues of five double lodgings in a rowe, there will be lodged all the Pikes and extraoꝛdinarie Meliti of the chiefe maine battaillies. And so from the West gate to the South as the Trench tourneth, euen in the verie same maner in other tenne reues of ten lodgings in a reue, there shall be lodged the Pikes, and extraoꝛdinarie Meliti of the aiding maine battaillies. Their heades oꝛ their Connestables may take those lodgings, that shall seeme vnto them most commodious, on the part towarde the Trench. The artillerie, I would dispose through out all the campe, along the bancke of the trench : and in all the other space that should remaine towarde West, I would lodge all the vnarmed, and place all the impedimentes of the Campe. And it is to be vnderstode, that vnder this name of impedimentes (as you know) the antiquitie ment all the same traine, and all those thinges, which are necessarie for an armie, besides the Shouldours : as are Carpenters, Smithes, Masons, Ingeners, Bombardiers, although that those might be counted in the number of the armed, herdesmen with their herdes of mottions and beues, which for victualing of the armie, are requisite : and mozeouer maisters of all sciences, together with publique carriages of the publique munition, which pertaine as well to victualing as to arming.

How the artillerie must be placed in the Campe.

Lodgings for the vnarmed men, and the places y are appointed for y impediments of the campe

For I would not distinguish these lodgings particularly, onely I would marke out the waies which should not be occupied of them : then the other spaces, that betwene the wayes shall remaine, which shal be foure I would appointe them generallye, for all the

## The sixte Booke of

saide impedimentes that is one for the heardmen, the other for artificers and craftes men, the third for publique carriages of victualls, the fourth for the munition of armour and weapons. The wayes which I would should be left without occupying them, shall be the market way, the head way, and moreouer a way that should be called the midwaye, which should goe from North to South, and should passe through the middest of the market way, which from the West part should serue for the same purpose, that the ouerthwart way doth on the East part. And besides this, a way which shall go about on the hinder part, along the lodgings of the Pikes and extraordinarye Meliti, and all these wayes shall be two and twentie yardes and a halfe broad. And the artillerie, I would place along the trench of the campe, round about the same.

Baptiste. I confesse that I vnderstand not, nor I beleue that also to say so, is any shame vnto mee, this being not my exercise: notwithstanding, this order pleaseth mee much: onely I would that you should declare mee these doubtles: The one, why you make the way, and the spaces about so large. The other, that troubleth me more, is these spaces, which you appoynt out for the lodgings, how they ought to be vsed.

Fabritio. You must note, that I make all the waies 22. yardes and a halfe broad, to the intent that thorough them, may goe a battaille of men in aray, where if you remember well, I told you how euery band of men, taketh in breadth betwene 18. and 22. yardes of space to march or stande in. Now where the space that is betwene the Trench, and the lodgings is 75. yardes broad, the same is most necessarie, to the intent they may there order the battailes, and the artillerie both to conduct by the same the payes and to haue space to retire themselves with new trenches,

and



and new fortification if neede were : The lodgings also, stand better so farre from the ditches, being the more out of daunger of fires, and other thinges, which the enemy might throw to hurt them. Concerning the second demaund, my intent is not that euery space of mee marked out, be couered with a pavilion onely, but to be vsed, as tourneth commodious to such as lodge there, either with more or with lesse tentes, so that they go not out of the bounds of the same. And so to marke out these lodgings, there ought to be most cunning men, and most excellent Architectours, whom, so soone as the Captaine hath chosen the place, may know how to giue it the fashion, and to distribute it, distinguishing the waies, deuiding the lodgings with Coardes and staues, in such practised wise, that straight way they may be ordained, and deuided : and to minde that there grow no confusion, it is conuenient to tourne the camp, alwaies one way, to the intent that euery man may know in what way, in what space he hath to finde his lodging : and this ought to be obserued in euery time, in euery place, & after such maner, that it seeme a moving Citie, the which where so euer it goeth, carrieth with it the verie same wayes, the verie same habitacions, and the verie same aspectes, that it had at the first : The which thing they cannot obserue, whom seeking strong situations, must chaunge forme, according to the variacion of the ground : But the Romanes in the plaine, made strong the place where they incamped with trenches, and with Rampires, because they made a space about the campe, and before the same a ditche, ordinarie broade foure yardes and a halfe, and deepe about two yardes and a quarter, the which spaces, they increased, according as they intended to tarie in a place, and according as they feared the enemy. I for my part at this present, would not make the listes, if I intend not to Winter in a place : Yet I would make

The Campe  
ought to be al-  
waies of one  
fashion.

## *The sixt Booke of*

the Trench and the bancke no lesse then the foresayd, but greater according to necessitie. Also considering the artillerie, I would intrench vpon euery coꝛner of the Campe, a halfe circle of ground, from whence the artillerie might flanke, whom so euer should seeke to come ouer the trench. In this practise in knowing how to ordaine a campe, the Souldiours ought also to be exercised, and to make with them the officers expert, that are appointed to marke it out, and the Souldiours readie to know their places: noꝛ nothing therein is difficult, as in the place thereof shall be declared: wherfoꝛe I wil go foꝛward at this time to y<sup>e</sup> ward of the campe, because without distribution of the watch, all the other paine that hath bene taken, should be vaine.

Baptiste. Befoꝛe you passe to the watch, I desire that you would declare vnto mee, when one would pitch his campe neere the enemye, what way is vsed: foꝛ that I know not how a man may haue time to bee able to ordaine it without perill.

Fabritio. You shall vnderstand this, that no Captaine will lye neere the enemye, except he, that is disposed to fight the field, when soeuer his aduersarie will: and when a Captaine is so disposed, there is no perill, but ordinarie: foꝛ that the two partes of the armie, stand allwaies in a readinesse, to fight the battaille, and the other maketh the lodgings. The Romanes in this case gaue this order of fortifying the campe, vnto the Triarii: and the Principi, & the Astati, stode in armes. This they did, foꝛ as much as the Triarii, being the last to fight might haue time ynough, if the enemye came, to leaue the worke, and to take their weapons, and to get them into their places. Therefore, according vnto the Romanes maner, you ought to cause the campe to bee made of those battailles, which you will set in the hinder part of the armie, in the place of the Triarii. But let vs tourne to reason of the watch.

I thinke I haue not found, amongst the antiquities, that for to warde the campe in the night, they haue kept watche without the Trench, distant as they vse now a daies, whom they call Scoutes: the which I beleue they did: thinking that the armie might easely be deceiued, through the difficultie, y is in seeing them againe, for that they might be either corrupted, or oppressed of the enemy: So that to trust either in parte, or altogether on them, they iudged it perillous. And therefore, all the strength of the watch, was within y trench, which they did withall diligence keepe, and with most great order punished with death, whomsoever observed not the same order: the which how it was of them ordained, I will tell you no other wise, least I should be tedious unto you, being able by your selfe to see it, if as yet you haue not scene it: I shall onely briefly tell that, which shall make for my purpose. I would cause to stand ordinarily euerie night, the third part of the armie armed, & of the same, the fowerth part alwaies on foote, whom I would make to be distributed, throughout all the banckes, and throughout all the places of the armie, with double warde, placed in euerie quadrant of the same: Of which, part should stand still, parte continually should go from the one corner of the Campe, to the other: and this order, I would obserue also in the day, when I should haue the enemy nere.

The antiquitie  
vled no Scouts

The watch &  
ward of the  
Campe.

Concerning the geuing of the watch worde, and remuyng the same euerie euening, and to do the other thinges, which in like watches is vled, because they are thinges well inough knowen, I will speake no further of them: onely I shall remember one thing, for that it is of great importaunce, and which causeth great safegarde obseruing it, and not obseruing it, muche harme: The which is, that there be obserued great diligence, to knowe at night, who lodgeth not in the Campe, and who, cometh a newe: and this is an

Diligence  
ought to be  
vled, to know  
who lieth out  
of the camp.



## The sixt Booke of

and who they  
be that com-  
meth of new.

Claudius.  
Nero.

The iustice y  
ought to be in  
a campe.

The fautes y  
the antiquitie  
punished with  
death.

an easie thing to see who lodgeth, with the same order that we haue appointed: for as much as euerie lodging hauing the determined number of menne, it is an easie matter to see, if they lacke, or if there be more men: and when they come to be absent without licence, to punish them as fugitiues, and if there be more, to vnderstand what they be, what they make there, and of their other conditions. This diligence maketh that y enemy cannot but with difficulty, practise with thy captaines, and haue knowledge of thy counsailes: which thing if of y Romanes, had not ben diligently obserued, Claudius Nero could not, hauing Aniball nere him, departed from his Campe, which he had in Lucania, and to goe and to retourne from Barca, without Aniball should haue first hearde thereof some thing. But it suffiseth not to make these orders good, except they bee caused to be obserued, with a great seueritie, for that there is nothing that would haue more obseruation, then is requisite in an armie: therefore the lawes for y maintenance of the same, ought to be sharpe & harde, and y executour thereof most harde. The Romanes punished with death him that lacked in the watch, he that forsoke the place that was giuen him to fight, he that caried any thing, hidde out of the Campe, if any man should say, that he had done some worthe thing in the fight, and had not done it, if any had fought without the commaundement of the Captayne, if any had for feare, cast away his weapons: and when it happened, that a Cohorte, or a whole Legion, had committed like fault, because they would not put to death all, they yet tooke all their names, and did put them in a bagge, and then by lotte, they drew out the tenth parte, and so those were put to death: the which punishment, was in such wise made, that though euery man did not seele it, euerie man notwithstanding feared it: and because where bee great punishmentes, there ought to bee al-  
so

so rewarde, minding to haue merite at one instant, to feare and to hope, they had appointed rewarde to euery worthe acte, as he that fighting, saued the life of one of his Citezens, to him that first leapt vpon the wall of the enemies Towne, to him that entered first into the Campe of the enemies, to him that had in fighting hurte, or slaine the enemy, he that had stricken him from his horse: and so euery vertuous acte, was of the Countailes knowne and rewarded, and openly of euery man praised, and such as obtayned guiftes, for any of these thinges, besides the glorie and fame, which they got amongst the souldiours, after when they returned into their countrie, with solempne pompe, and with great demonstration among their friends & kinsfolks, they shewed them. Wherefore it was no maruaile though the same people gotte so much dominion, hauing so much obseruation in punishment, and rewarde towarde them, whom either for their well doing, or for their ill doing, should deserue either praise or blame:

Where great punishments be, ther ought likewise to be great rewarde.

It was no maruell that y<sup>e</sup> Romans became mightie Princes.

Of which things it were conuenient to obserue the greater part. For I thinke not good to keepe secrete, one manner of punishment of them obserued, which was, that so soone as the offendour, was before the Tribune, or Counsaile conuicted, he was of the same lightly stricken with a rodde: after the which striking, it was lawfull for the offender to flye, and to all the souldiours to kill him: so that straight way euery man threw at him either stones, or darts, or with other weapons, stroke him in such wise, that he went but little way a line, and most few escaped, and to those that so escaped, it was not lawfull for them to retorne home, but with so many incommodities, and such great shame and ignomie, that it should haue bene much better for him to haue died. This manner is seene, to be almost obserued of the Swizzers, who make y<sup>e</sup> condemned to be put to death openly of thother souldiours, y<sup>e</sup> which

## The sixte Booke of

A meane to  
punish & exe-  
cute iustice,  
without rai-  
sing tumultes.

Manlius Ca-  
pitolinus.

Souldiours  
sworn to keepe  
the discipline  
of warre.

Women and  
idle games,  
were not suf-  
fered by y<sup>e</sup> an-  
tiquitie, to be  
in their armies

is well considered, and excellently done : for that inten-  
ding , that one bee not a defendour of an euill doer,  
the greatest reamedie that is found , is to make him  
punisher of the same: because otherwise, with other re-  
spect hee fauoureth him : where when he himselfe is  
made executioner, with other desire, he desireth his pu-  
nishment , then when the execution cometh to an o-  
ther . Therefore minding , not to haue one fauored in  
his fault of the people, a great remedie it is, to make  
that the people, may haue him to iudge. For the greater  
prooffe of this, the insample of Mālius Capitolinus might  
be brought , who being accused of the Senate, was de-  
fended of the people , so long as they were not iudge,  
but by comming arbitratours in his cause, they condēp-  
ned him to death. This is then a way to punish, without  
raising tumultes , and to make iustice to be kept : and  
for as much as to brydel armed men , neither the feare  
of the lawes , nor of men suffice not , the antiquitie  
ioyned therevnto the authoritie of God : and therefore  
with most greater Ceremonies, they made their souldi-  
ours to sweare, to keepe the discipline of warre, so that  
doing contrariwise, they should not onely haue to feare  
the Lawes , and men, but God : and they vsed all dili-  
gence, to fill them with Religion.

Baptiste . Did the Romaines permit , that women  
might be in their armies, or that there might be vsed  
these idle playes, which they vse now a daies?

Fabritio . They prohibited the one and the other,  
and this prohibition was not much difficulte : for that  
there were so many exercises, in the which they kept  
euerie day the souldiours , some whiles particularly,  
some whiles generally occupied, that they had no time  
to thinke, either on Venus , or on playes, nor on any o-  
ther thing, which sedicious and vnprofitable Souldiours  
doe.

Baptiste . I am herein satisfied, but tell mee, when the  
armie



armie had to remoue, what order kept they?

Fabritio. The chiefe Trumpet sounded three times, at the first sound, they tooke vp the tentes, and made the packes, at the second, they laded the carriage, at the third, they remoued in the same maner aforesaid, with the impedimentes after euery part of armed men, placing the Legions in the middelt: and therefore you ought to cause after the same sort, an extraordinarie maine battaille to remoue: and after that, the particular impediments therof and with those, the fourth part of the publique impedimentes, which should be all those that were lodged in one of those partes, which a litle afoze we declared: and therefore it is conuenient, to haue euery one of them appointed to a maine battaille, to the extent that y<sup>e</sup> armie remouing, euerie one might know his place in marching: and thus euery maine battaille ought to goe alway with their owne impediments, and with the fourth part of the publique impedimentes, following after in such maner, as we shewed that the Romanes marched.

Order in the remouing the armie by the sounds of a Trumpet.

Baptiste. In pitching the Campe, had they other respectes, then those you haue told?

Fabritio. I tell you againe, that the Romanes when they incamped, would be able to keepe the accustomed fashion of their maner, the which to obserue, they had no other respect: but concerning for other considerations, they had two principall, the one, to incampe themselves in a wholesome place, the other, to place themselves, where the enemy could not besiege them, nor take from them the way to the water, or victualls. Then for to auoide infirmitie, they did sit from places fennie, or subiect to hurtfull windes: which they knew not so well, by the qualitie of the situation, as by the face of the inhabitants: for when they saw them euill coloured, or swollen, or full of other infection, they would not lodge there: concerning the other

Respects to be had for incamping.

How to choose a place to incampe.

## The sixte Booke of

How to auoid  
diseases from  
the armie.

The wonder-  
full commo-  
die of exercise.

The provision  
of victuals  
ought alwaies  
to be in a re-  
dinesse in an  
armie.

respect to prouide not to be besieged, it is requisite to consider the nature of the place, where the friendes lie, and where the enemies, and of this to make a cōiecture, if thou maist be besieged or no: and therfore it is meete that the Captaine be most expert, in the knowledge of situations of countries, and haue about him diuers men, that haue the verie same expertnesse. They auoid also diseases, and famishment, with causing the armie to keepe no misrule, for that to purpose to maintaine it in health, it is needfull to prouide, that the souldiours may sleepe vnder tentes, that they may lodge where be Trees that make shadow, where wodde is for to dresse their meat, that they goe not in the heate, and therfore they must be drawen out of the Campe, before day in Sommer, and in Winter, to take hēde, that they march not in the Snow, and in the Frost, without hauing commoditie to make fire, & not to lacke necessa-  
rie apparell, nor to drinke naughtie water: those that fall sicke by chaunce, make thē to be cured of Phisitions: because a Captaine hath no remedie, when he hath to fight with sicknes, and with an enemy: but nothing is so profitable, to maintaine the armie in health, as is the exercise: and therfore the antiquitie euery day, made them to exercise: whereby is sene, how much exercise auaiileth: for that in y campe: it kepeth thē in health, and in the fight victorizous. Concerning famishment, it is necessarie to see, that the enemy hinder thē not of thy victualles, but to prouide where thou maist haue it, and to see that the same which thou hast, be not lost: and therfore it is requisite, that thou haue alwaies in provision with the armie, sufficient victuall for a moneth, and then remouing into some strong place, thou must take order with thy next friendes, that daily they may prouide for thē, and aboue all thinges bestowe the victuall with diligence, geuing euery day to euery man a reasonable measure, and obserue after  
such

such sort this point, that it disorder thee not: because all other thing in the warre may with time be overcome, this only with time overcome thee: nor there shall neuer any enemy of thine, who may overcome thee with famishment, that will seeke to overcome thee with yron. For that though the victorie be not so honorable, yet it is more sure and more certaine: Then, the same armie cannot ~~auoid~~ famishment, that is not an obseruer of iustice, which licenciously consumeth what it list: because the one disorder, maketh that the victualls cometh not vnto you, the other, that such victuall as cometh, is vnprofitably consumed: therefore the antiquitie, ordained, that they should spend the same, which they gaue, and in the same time when they appointed: for that no souldiour did eate, but when the Captaine did eate: the which how much it is obserued of the armies now a dayes, euery man knoweth and worthily they cannot be called men of good order and sober, as the antiquitie, but lasciuious & drunkards.

Babiste. You sayd in the beginning of ordering the Campe, that you would not stand onely vpon two maine battailles, but would take foure, for to shew how a iust armie incamped: therefore I would you should tell me two thinges, the one, when I should haue more or lesse men, how I ought to incampe them, the other, what number of Souldiours should suffice you to fight against what so euer enemy that were.

Fabritio. To the first question I aunswere you, that if the armie be more or lesse, then foure or six thousand souldiours, the orders of lodgings, may be taken away, or ioyned so many as suffiseth: and with this way a man may goe in more, and in lesse, into infinite: Notwithstanding the Romanes, when they ioyned together two consull armies, they made two Campes, and they tourned the partes of the vnar-

How to lodge in the campe more or lesse men, then the ordinary.



## The sixt Booke of

med, the one against the other. Concerning the second question, I say vnto you, that the Romanes ordinarie armie, was about xxiii. M. souldiours: but when they were drinen to fight against the greatest power that might be, the most that they put together were l. M. With this number, they did set against two hundred thousand Frenchmen, whom assaulted them after the first warre, that they had with the Carthageners. With this verie same number, they fought against Anniball. And you must note, that the Romanes, and the Greekes, haue made warre with few, fortifying themselves through order, and through art: the West and the East haue made it with multitude: but the one of these nations, doth serue with naturall furie, as do the men of the West partes, the other through the great obedience which those men haue to their king. But in Greece, and in Italie, being no naturall furie, no: the naturall reuerence towards their king, it hath bene necessary for them to learne the discipline of war, the which is of so much force, that it hath made that a few hath bene able to overcome the furie, and the naturall obstinatenesse of many. Therefore I say, that mindning to imitate the Romanes, and the Greekes, the number of l. M. Souldiours, ought not to be passed, but rather to take lesse: because many make confusion, no: suffer not the discipline to be obserued, and the orders learned, and Pirrus vsed to say, that with xv. thousand men he would assaile the world: but let vs passe to another part. We haue made this our armie to winne a field, and shewed the trauailes, that in the same fight may happen: we haue it made to march, and declared of what impedimentes in marching it may be disturbed: and finally we haue lodged it, where not onely it ought to take a litle rest of the labours passed, but also to thinke how the warre ought to be ended: for that in the lodgings, is handled many things, inespacially the

The number  
of men that an  
armie ought  
to be made of,  
to be able to  
fight with the  
puissantest  
enemy is.

Pirrus.

thy enemies as yet remayning in the felde, and in suspected Townes, of whome it is good to be assured, and those that be enemies to overcome them: therefore it is necessarie to come to this demonstration, and to passe this difficultie with the same glorie, as hitherto we haue warred. Therefore coming to particuler matters,

I say that if it should happen, that thou wouldest haue many men, or many people to do a thing, which were to thee profitable, and to them great hurt, as should be to breake downe the wall of their citie, or to send into exile many of them, it is necessarie for thee, either to beguile them in such wise that euerie one beleue not that it toucheth him: so that succouring not the one the other they may finde them selues all to be oppressed without remedie, or els vnto all to commaunde the same, which they ought to do in one selfe day, to the intent that euerie man beleuing to be alone, to whom the commaundement is made, may thinke to obey and not to remedie it: and so without tumult thy commaundement to be of euerie man executed. If thou shouldest suspect the fidelitie of any people, and would assure thee, and overcome them at vnwares, so to colour thy intent moze easely, thou canst not doe better, then to counsell with them of some purpose of thine, desiring their aide, and seeme to intend to make an other enterprise, and to haue thy minde farre from thinking on them: the which will make, that they shall not thinke on their owne defence, beleuing not that thou purposdest to hurt them, and they shall giue thee commoditie, to be able easely to satisfie thy desire.

When thou shouldest perceiue, that there were in thine armie some, that vsed to aduertise thy enemies of thy deuises, thou canst not doe better, minding to take commoditie by their traiterous mindes, then to commen with them of those thinges, that thou wilt not do, and those that thou wilt doe, to keepe secret, and to say

How to cause men to doe such a thing as should be profitable for thee and hurtfull to themselves.

How to overcome men at vnwares.

How to turne to commodity the doings of such as vie to aduertise thy enemy of thy proceedings.

## The sixt Booke of

How to order  
the campe that  
y<sup>e</sup>emie shal  
not perceiue  
whether the  
same be demi-  
nished, or in-  
creased.

A saying of  
Metellus.

Marcus Cras-  
sus.

How to vn-  
derstand the  
secrets of thy  
enemy.

A policie of  
Marius, to vn-  
derstand how  
he might trust  
the Fréchemé.

to doubt of thinges, that thou doubttest not, and those of which thou doubttest, to hide : the which shall make the enemye to take some interprise in hande, believing to know thy deuises, whereby easily thou maiest be guile and oppresse him. If thou shouldest intend (as Claudius Nero did) to diminish thy armye, sending helpe to some friende, and that the enemye should not be aware there of, it is necessary not to diminish the lodgings, but to maintaine the signes, & the orders whole, making the very same fires, and the verie same wardes through out all the campe, as were wont to be afore.

Likewise if with thy armye there should ioyne newe men, and wouldest that the enemye shoulde not knowe that thou werste ingrossed, it is necessarie not to increase the lodgings: Because keeping secret doinges and deuises, hath alwaies bene most profitable. Wherefore Metellus being with an armye in Hispanie, to one, who asked him what he would doe the next day, answered, that if his sherte knew therof, he would bourne it. Marcus Crassus, vnto one, whome asked him, when the armye should remoue, sayd believing thou to bee alone not to here the trumpet: If thou shouldest desire to vnderstand the secretes of thy enemye, and to know his orders, some haue vled to send ambassadours, and with them in seruantes apparell, moste expertest men in warre: whome hauing taken occasion to see the enemies armed, and to consider his strength and weaknesse, it hath giuen them opportunitie to ouercome him. Some haue sent into exile one of their familiars, & by meanes of the same, hath knowen the deuises of his aduersarye. Also like secretes are vnderstode of the enemies when for this effect there were taken any prisoners.

Marius which in the warre that he made with the Cimbric, for to know the faith of those Frenchmen, who then inhabited Lombardie, and were in leage with the Romane people, sent them letters open, and sealed



sealed and in the open he wrote, that they should not open the sealed, but at a certaine tunc, and before the same time demaunding them againe, and finding them opened, knewe thereby that their faith was not to be trusted. Some Captaynes, being inuaded, haue not desired to go to meet the enemye, but haue gone to assault his countrey, and constrained him to returne to defend his owne home: The which many times hath come well to passe, so that those Souldiours beginning to fill themselves with booties, and confidence to overcome, shall sone make the enemies souldiours to ware afrated, when they supposing themselves conquerours, shall understand to become losers: So that to him that hath made this deuersion, many times it hath proued well. But onely it may be done by him, which hath his countrey stronger then that of the enemies, because when it were otherwise, he should goe to losse. It hath bene often a profitable thing to a Captayne, that hath bene besieged in his lodgings by the enemye, to moue an intreatie of a gragment, and to make truse with him for certayne dayes: the which is wonte to make the enemies more negligente in all doinges: so that auayling thee of their negligence, thou mayest easely haue occasion to gette thee out of theyr handes. But this waye Silla deliuered himselfe twice from the enemies and with the very same decepte, Asdruball in Hispanie gotte out of the force of Claudius Nero, whom he had besieged him. It helpeth also to deliuer a man out of the danger of the enemye, to doe some thing beside the foresayde, that maye keepe him at a baye: this is done in two maners, either to assaulte him with parte of thy power, so that he being attentue to the same fight, maye giue commoditie to the rest of thy menne to be able to saue themselves, or to cause to rise some newe accidente, which for the straungenesse of the thing, may make him to maruell, and for this occasion to

What some captaynes haue don whē their country hath bene inuaded of enemies.

To make the enemye negligent in his doings.

Silla.

Asdruball.

## The sixt Booke of

The policie of Anibal, whereby he escaped out of y<sup>e</sup> daunger of Fabius Maximus.

A Captaine must deuise how to deuide the force of his enemies.

How to cause the enemy to haue in suspect his most trusty men.

Aniball.

Coriolanus.

Metellus against Iugurte.

A practise of the Romane Oratours, to bring Anibal out of credit with Antiochus.

How to cause the enemy to deuide his power.

stand doubtfull, and still: as you know how Aniball did, who being inclosed of Fabius Maximus, tied in the night small Hauens kindeled betwene the hornes of manie Dren, so that Fabius astonied at the strangenesse of the same sight, thought not to let him at all the passage. A Captaine ought among all other of his affaires, with all subtiltie to deuise to deuide the force of the enemy, either with making him to suspect his owne menne, in whome he trusteth, or to giue him occasion, that he may seporate his men, and thereby to become more weake.

The first way is done with keeping safe the things of some of those which he hath about him, as to saue in the warre their menne and their possessions, rendering them their children, or other their necessaries without ransome. You know that Anniball hauing burned all the fieldes about Rome, hee made ouely to be reserved safe those of Fabius Maximus.

You know how Coriolanus coming with an armie to Rome, preserved the possessions of the Nobilitie, and those of the commualtie he burned, and sacked. Metellus hauing an armie against Iugurte, all the oratours, which of Iugurte were sent him, were required of him, that they would giue him Iugurte prisoner and after to the very same men writing letters of the very same matter, wrought in such wise, that in shorte time Iugurte hauing in suspect all his counsellours, in diuers maners put them to death.

Aniball being fledde to Antiochus, the Romane oratours practised with him so familiarly, that Antiochus being in suspect of him, trusted not any more after to his counsellors. Concerning to deuide the enemies menne, there is no more certainer way, then to cause their contrie to be assaulted, to the intent that being constrained to goe to defend the same, they may forsake the warre. This way Fabius used hauing against his armie

armie the power of the Frenchmen, of y<sup>e</sup> Luscanis, Chimbres and Samites. Titus Didius hauing a few men in respect of those of the enemies, and looking for a legion from Rome, and the enemies purposing to go to encounter it, to the intent that they should not go, caused to be noised through all his arme, that hee intended the next day to fight the field with the enemies: after hee v<sup>se</sup>d meanes, that certaine of the prisoners, that he had taken afore, had occasion to runne away. Who declaring the order that the Consull had taken to fight the next day, by reason whereof the enemies being afraid to diminish their owne strength, went not to encounter the same Legion; and by this way they were conducted safe. The which meanes serueth not to diuide the force of the enemies, but to augment a mans owne. Some haue v<sup>se</sup>d to diuide the enemies force, by letting him to enter into their countrie, and in p<sup>ro</sup>se haue let him take many townes, to the intent that putting in the same garnisons, he might thereby diminish his power, and by this way hauing made him weake, haue assailed and overcome him. Some other minding to goe into one p<sup>ro</sup>uince, haue made as though they would haue inuaded another, and v<sup>se</sup>d so much diligence, that sodainly entering into the same, where it was not doubted that they would enter, they haue first wonne it: before the enemy could haue time to succour it: so that the enemy being not sure, whether thou purposeth to tourne backe, to the place first of the threatned, is constrained not to forsake the one place, to succour the other, and so many times he sendeth neither the one nor the other. It importeth besides the said thinges to a Captaine, if there growe sedition or discord among the souldiours, to knowe with Arte how to extingwish it: The best way is to chastice the heades of the faultes, but it must be done in such wise, that thou mayest first haue

How Titus Didius staied his enemies y<sup>e</sup> were going to encounter a Legion of men that were coming in his ayde.

How some haue caused y<sup>e</sup> enemy to diuide his force.

A policie to win y<sup>e</sup> enemies countie before he be aware.

How to reforme sedition and discord.



## The sixt Booke of

The benefite  
that the repu-  
tation of the  
captaine cau-  
seth, which is  
onely gotten  
by vertue.

The chiefe  
thing that a  
captaine ought  
to doe.

When pay wa-  
reth, punish-  
ment is not to  
be executed.

The inconue-  
nience of not  
punishing.

oppressed them, before they be able to be aware : The way is , if they be disfaunt from the, not onely to call the offenders : but together with them all the other , to the entent that not belæuing , that it is for any cause to punish them, they become not contumelious, but giue commoditie to the execution of the punishment : When they be present , thou oughtest to make thy selfe strong with those that be not in fault , and by meane of their helpe to punish the other . When there happeneth discorde among them, the best way is to bring them to the perill , the feare whereof is wont alwaies to make them agree . But that which aboue all other thing kee- peth the armie in vnitie , is the reputation of the Cap- taine, the which onely groweth of his vertue : because neither blood, nor auctoritie gaue it euer without vertue. And the chiefe thing which of a Captaine is looked for to be done , is, to kepe his souldiours punished, and paid: for that when so euer the pay lacketh , it is conuenient that the punishment lacke : because thou canst not cor- recte a souldiour , that robbeth, if thou dost not pay him , nor the same minding to liue, can not abstaine from robbing : but if thou payest him , and punishest him not , hee becommeth in euerie condicion insolent : For that thou becommeth of small estimation, where thou chauncest not to bee able to maintaine the dig- nitie of thy degree , and not maintaining it, there fol- loweth of necessitie tumult and discorde , which is the ruine of an armie. Old Captaines had a trouble, of the which the present be almost free, which was to in- terprere to their purpose the sinister auguries : be- cause if their fell a thunderbolt in an armie , if the Sunne were darkened or the Moone , if there came an Earthquake , if the Captaine either in getting vp, or in lighting of his horse fell, it was of the souldiours in- terpreted sinisterously : And it ingendred in them so much feare, that coming to fight the fielde, easily they should

should haue lost it : and therefore the auncient Capitaines so soone as a like accident grew, either they shewed the cause of the same, and reduced it to a naturall cause, or they interpreted it to their purpose. Caesar falling in Affrica, in comming off the Sea, saide, Affrica I haue taken thee. Whereouer many haue declared the cause of the obscuring of the Moone, and of earthquakes: which thing in our time cannot happen, as well because our men be not so superstitious, as also for that our religion taketh away altogether such opinions: all be it when they should chaunce, the orders of the antiquitie ought to be imitated. When either famishment or other naturall necessitie, or humane passion, hath brought thy enemy to an utter desperation, and he driven of the same, commeth to fight with thee, thou oughtest to stand within thy Campe, and as much as lieth in thy power, to stay the fight. So the Lacedemonians did against the Pelonians, so Caesar did against Afranio, and Petrio. Fuluius being Consull against the Cimbrians, made his horsemen manie dayes continually to assault the enemies, and considered how they issued out of their Campe for to follow them: Wherefore he set an ambush behinde the Campe of the Cimbrians, and made them to be assaulted of his horsemen, and the Cimbrians issued out of their Campe for to follow them. Fuluius got it, and sacked it. It hath bene of great vtilitie to a Captaine, hauing his armie nere to the enemies armie, to send his men with the enemies Ansignes to robbe, and to burne his owne countrie, whereby the enemies beleauing those to be men, which are come in their aide, haue also runne to helpe to make them the pray: and for this disordering themselves, hath thereby giuen opportunitie to the aduersarie to ouercome them. This way Alexander of Epirus vsed against the Illirians, and Leptenus of Siratusa against the Carthaginers,

Caesar chauncing to fall, made y same to be supposed to signify good lucke.

Religion taketh away fantastical opinions.

In what cases a Captaine ought not to fight with his enemy if he may otherwise choole.

A policie of Fuluius whereby he got and spoiled his enemies camp.

A policie to disorder the enemy.

# The sixth booke of

A policie to  
ouercome the  
emie.

A policie.

How to be-  
guile y enemy.

How Menno-  
nus trained  
his enemies  
out of strong  
places to be  
the better a-  
ble to ouer-  
come them.

and both to the one and to the other, the deuise came to passe most happily. Many haue ouercome theemie, geuing him occasion to eate and to drinke out of measure, for faining to haue feared, & leading their campes full of wine and herds of cattaille, wherof theemie being filled aboue all naturall vse, haue then assaulted him, and with his destruction ouerthrowen him. So Tammirus did against Cyrus, and Tiberius Gracchus against the Spaniards. Some haue poisoned the wine, & other thinges to feede on, for to be able more easily to ouercome them. I said a litle afoze how I found not, that the antiquitie kept in the night scoutes abroade, and supposed that they did it for to auoide the hurt, which might grow thereby: because it is found that through no other meane then through the watch man, which was set in the day to watch theemie, hath bene cause of the ruine of him, that set him there: for that many times it hath happened, that he being taken, hath bene made perforce to tell them the token, wherby they might call his fellowes, who coming to the token, haue bene slaine or taken. It helpeth to beguile theemie sometime to varie a custome of thine, wherupon he hauing grounded himselfe, remaineth ruined: as a Captaine did once, whom vsing to cause to be made signes to his men for coming of theemies in the night with fire, and in the day with smoke, commaunded that without any intermission, they should make smoke and fire, and after coming upon them theemie, they should rest, whom believing to come without being sene, perceiuing no signe to be made of being discouered, caused (through going disordered) more easie the victorie to his aduersarie. Mennonus a Rodian, minding to draw from strong places theemies armie, sent one vnder colour of a fugitive, the which affirmed, how his armie was in discorde, and that the greater part of



of them went away : and soz to make the thing to bee credited, he caused to make in sport, certaine tumultes among the lodgings : whereby the enemye thinking thereby to be able to discomfite them, assaulting them, were ouerthrowen.

Besides the said thinges, regard ought to bee had not to bring the enemye into extreme desperation: wherevnto Caesar had regard, fighting with the Duchenen, who opened them the way, seeing, how they being not able to flye, necessitie made them strong, and would rather take paine to follow them, when they fled, then the perill to overcome them, when they defended themselves.

Lucullus seeing how certaine Macedonian horsemen, which were with him, went to the enemies part, straight way made to sound to battaile, and commaunded, that the other men should follow him : whereby the enemies beleuing that Lucullus would begin the fight, went to encounter the same Macedonians, with such violence, that they were constrained to defend themselves : and so they became against their willes, of fugitiues, fighters. It importeth also to know, how to be assured of a towne, when thou doubtst of the fidelitie thereof, so soone as thou hast wonne the field, or before, the which certaine olde insamples may teach thee.

Pompei doubting of the Catenensians, prayed them that they would be content, to receiue certaine sickemenne, that he had in his armie, and sending vnder the habite of sick persones, most lustie menne, gotte the towne. Publius Valerius, fearing the fidelitie of the Epidamnians, caused to come, as who saith, a Wardon to a church without the towne, and when all the people were gone for Wardon, he shutte the gates, receiuing after none in, but those whome he trusted. Alexander Magnus, minding to goe into Asia, and to assure himselfe of Thracia, tooke with him all the principall

The enemye ought not to be brought into extreme desperation.

How Lucullus constrained certaine men that ran away from him to his enemies, to fight whether they would or not.

A policie wher by Pompey got a Towne. How Publius Valerius assured himselfe of a Towne.

A policie by Alexander Magnus vsed to be assured of all

## The sixt booke of

Thracis, which  
Philip king of  
Spain did prac-  
tise to be asu-  
red of Englad  
when he went  
to S. Quintins.

Examples for  
Captaines to  
winne y harts  
of y people.

ripall of the same Prouince, giuing them prouision, and he set ouer the common people of Thracia, men of low degree: and so he made the Princes contented with paying them, and the people quiet, hauing no heades that should disquiet them: But among all the thinges, with the which the Captaines, winne the harts of the people, be the ensamples of chastitie & iustice, as was the same of Scipio in Spaine, when he rendered that young womā most faire of personage, to her father, and to her husband: the which made him more, then with force of armes to winne Spaine.

Cesar hauing caused that wood to bee payed for, which he had occupied for to make y Liffes, about his army in fraunce, got so much a name of iustice, y he made easer the conquest of the same prouince. I cannot tell what remaineth me, to speake more vpon these accidentes, for y concerning this matter, ther is not left any part, y hath not bene of vs disputed. Onely there lacketh to tell, of y manner of winning, & defending a towne, the which I am readie to do willingly, if you be not now wearie.

Baptiste. Your humanitie is so much, that it maketh vs to follow our desires, without being afraied to bee reputed presumptuous, seeing that you liberally offer the same, which we should haue bene a shamed, to haue asked you: Therefore, we say vnto you onely this, that to vs you cannot do a greater, nor a more greatfuller benefite, then to finish this reasoning. But before that you passe to that other matter, declare vs a doubt, whether it be better to continue the warre, as well in the Winter, as they vse now adayes, or to make it onely in the Summer, and to goe home in the Winter, as the antiquitie did.

Fabritio. See, that if the prudence of the demaunder were not, there had remained behind a special part, that deserueth consideration. I ans were you againe, that the antiquitie did all thinges better, and with more

more prudence then we: and if we in other thinges commit some errour, in the affaires of warre, we commit all errour. There is nothing more indiscrete, or more perrillous to a Captaine, then to make warre in the Winter, and much more perrill beareth he, that maketh it, then he that abideth it: the reason is this. All the industrie that is vled in the disciplien of warre, is vled for to be prepared to fight a fielde with thy enemy, because this is the ende, whereunto a Captaine ought to goe or endeavour himselfe: for that the foughten fielde, giueth thee the warre wonne or lost: then he that knoweth best how to order it, and he that hath his army best instructed, hath most aduantage in this, and may best hope to ouercome. On the other side, there is nothing more enemy to the orders, & then the rough situations, or the cold watry times: for that the rough situations, suffereth thee not to descend thy bandes, according to thy discipline; the colde and watry times, suffereth thee not to keepe thy men together, nor thou canst not bring them in good order to the enemy: but it is conuenient for thee to lodge them, a sunder of necessitie, and without order, being constrained to obey to Castells, to Broughes, and to the Villages, that may receiue thee, in maner that all thy labour of thee, vled to instruct the army is vaine. For maruaile you not though now a daies, they warre in the Winter, because the armies being without discipline, know not the hurt that it doth them, in lodging not to gether, for that it is no grieue to them not to be able to keepe those orders, & to obserue that discipline, which they haue not: yet they ought to see how much harme, the Camping in the Winter hath caused, and to remember, how the French men in the yeare of our Lorde God, a thousand five hundred and thre, were broken at Cariliano of the Winter, and not of the Spaniards: for as much as I haue saide, he that assaulteth, hath more disadvantage,

Warre ought not to be made in winter.

Rough situations, cold & watry times are enemies to the order of warre.

An overthrow caused by winter.

Aa.

then



## The sixt Booke of

then he that defendeth: because the fowle weather hur-  
teth him not a littell, being in the dominion of others &  
minding to make warre. For that he is constrainned,  
either to stand together with his men, and to sustaine  
the incommoditie of water and colde, or to auoide it to  
deuide his power: But he that defendeth, may chuse the  
place as he listeth, and tary him with his fresh men: and  
he in a sodaine may set his men in aray, and goe to find  
a band of the enemies men, who cannot resist the vio-  
lence of them. So the Frenchmen were discomfited,  
and so they shall allwaies be discomfited, which will as-  
sault in the Winter an ennemie, who hath in him pru-  
dence. Then he that will that force, that orders, that  
discipline and vertue, in any condition auaille him not,  
let him make warre in the fielde in the winter: and be-  
cause that the Romanes would that all these thinges,  
in which they bestowed so much diligence, should auaille  
them, fledde no otherwise the Winter, then the high  
Alpes, and difficulte places, and whatsoeuer other thing  
should let them, for being able to shew their arte  
and their vertue. So this sufficeth to your de-  
maund, wherefore we will come to intreat  
of the defending and besieging of towines,  
and of their situations and  
edifications.

The



# The seventh booke of the arte of war,

of Nicholas Machiauel, Citizen and Secretarie

of Florence, vnto Laurence

Philip Strozze.

(..)



**Y**ou ought to know how y<sup>e</sup> towne  
and fortresses, may be strong ei-  
ther by nature or by industrie :  
by nature, those be strong, which  
be compassed about with riuers,  
or with fennes, as Mantua is  
and Ferrara, or which be builded  
vpon a rocke, or vpon a steepe  
hill, as Monaco, and Sanleo : For

Townes and  
Fortresses mai  
be strong two  
waies.

that those that stande vpon hilles, that be not much  
difficult to go vpon, be now a daies considering the ar-  
tillerie and the Canes, most weake. And therefore most  
often times in building, they seke now a daies a plaine,  
for to make it strong with industrie.

The place y<sup>e</sup>  
now a daies is  
most sought to  
fortifie in.

The first industrie is, to make the walles crooked,  
and full of tourninges, and of receiptes: the which  
thing maketh, that the enemye cannot come nere to it,  
because he may be hurt, not onely on the front, but  
by flaucke. If the walles be made high, they bee to  
much subiect to the blowes of the artillerie: if they bee  
made low, they be most easie to scale. If thou ma-  
kest the ditches on the out side thereof, for to giue dis-  
ficulcie to the Ladders, if it happen that the enemye fil  
them vpon (which a great armie may easily doe) the wall  
remaineth taken of the enemye. Therefore purposing  
to prouide to the one and the other foresaid inconueni-  
ences, I beleue (sauiug alwaies better iudgement)  
that the wall ought to be made high, and the Ditch  
within, and not without.

How a towne  
wall ought to  
be made.

The wall of a  
towne ought  
to be high, and  
the ditch with-  
in, & not with-

As.ii.

This

## The seventh Booke of

The thicknes  
that a Towne  
walle ought to  
be of, & y<sup>e</sup> dis-  
taunces be-  
twene euery  
flanker, and of  
what breadth  
& deapth the  
dich ought to  
be.

How the ordi-  
nance is plan-  
ted, for the de-  
fence of a  
towne.

The nature of  
the battaile.

This is the most strongest way of edification, that is made, for that it defendeth thee from the artillerie, and from Ladders, and it giueth not facilitie to the enemy, to fill up the ditch: When the wall ought to bee high, of that height as shall be thought best, and no lesse thicke, then two yardes and a quarter, for to make it more difficult to ruinate. Moreover it ought to haue the toures placed, with distaunces of hundred and fiftie yardes betwene the one and the other: the ditch with in ought to bee at least two and twentie yardes and a halfe broad, and nine deepe, and all the earth that is digged out, for to make the ditch, must be thzowen towards the citie, and kept vp of a wall, that must bee raised from the bottom of the ditch, and goe so high ouer the towne, that a man may be couered behinde the same, the which thing shall make the depth of the ditch the greater. In the bottome of the ditch, within euery hundred and fiftie yards, there would be a slaughterhouse, which with the ordinaunce, may hurt whom so euer should goe dolone into the same: the great artillerie that defend the Citie, are planted behind the wall, that shutteth the ditch, because for to defende the vtter wall, being high, there cannot be occupied commodiously, other then small or meane pæces. If the enemy come to scale, the height of the first wall most easily defendeth thee: if he come with ordinaunce, it is conuenient for him to batter the vtter wall: but it being battered, for that the nature of the battery is, to make the wall to fall, towarde the part battered, the ruine of the wall cometh, finding no ditch that receiueth and hideth it, to redouble the profunditie of the same ditch: after such sort, that to passe any further, it is not possible, finding a ruine that withholdeth thee, a ditch that letteth thee, and the enemies ordinaunce, that from the wall of the ditche, most safely killeth thee. Onely there is this remedie, to fill the ditch: the  
which



which is most difficult to do, as well because the capacitie thereof is great, as also for the difficultie, that is in comming nere it, the wall being strong and concealed, betwene the which, by the reasons aforesaid with difficultie may be entered, hauing after to go by a breach through a ruine, which giueth thee most great difficultie, so that I suppose a citie thus builded, to be altogether inuincible.

Baptiste. When there should be made besides the Ditch within, a Ditch also without, should it not be stronger.

Fabritio. It should be without doubt, but minding to make one ditch onely, mine opinion is, that it standeth better within then without.

Baptiste. Would you, that water should be in the ditches, or would you haue them drie?

Fabritio. The opinion of men herein be diuers, because the ditches full of water, saue them from mines vnder ground, the ditches without water, maketh more difficult the filling of them: but I hauing considered all, would make them without water, for that they be more sure: For ditches with water, haue bene seene in the Winter to be frozen, and to make easy the winning of a citie, as it happened to Mirandola, when Pope Iulie besieged it: & for to saue me from mines, I would make it so deepe, that he that would digge lower, should find water. The Fortresses also, I would build concerning the ditches and the walles in like maner, to the intente they should haue the like difficultie to be wonne. One thing I will earnestly aduise him, that defendeth a citie: and that is, that he make no Bulwarks without distant from the wall of the same: and another to him that buildeth the Fortresse, and this, that he make not any refuge place in them, in which he that is within, the first wall being lost, may retire: That which maketh mee to giue the first coun-

A dry ditch is most surest.

An aduertisement for the building & defending of a Towne or Fortresse.

## The seventh Booke of

Small fortresses can not be defended.

A town of war or Fortresse ought not to haue in them any retiring places.

Cæsar Borgia.

saile is, that no man ought to make any thing, by mean whereof, he may be driuen without remedie to leese his first reputation, the which losing, causeth to bee esteemed lesse his other doings, and maketh afraide them, whom haue taken vpon them his defence, and alwaies it shall chaunce him this, which I say, when there are made Bulwarke out of the towne, that is to be defended, because alwaies hee shall leese them, litle things now a daies, being not able to be defended, when they bee subiect to the furie of ordinaunce, in such wise that losing them, they bee beginning and cause of his ruine. When Genua rebelled against king Lewes of Fraunce, it made certaine Bulwarke a lost on those hilles, which bee about it, the which so sone as they were lost which was sodainly, made also the Citie to be lost. Concerning the second counsaile, I affirme nothing to bee to a Fortresse more perillous, then to be in the same refuge place, to be able to retire: Because the hope that men haue thereby, maketh y they leese the vtter warde, when it is assaulted: & that lost, maketh to be lost after all the Fortresse. For insample there is fresh in remembrance, the losse of the Fortresse of Furlue, when Catherin the Countesse defended it against Cæsar Borgia, sonne to Pope Alexander the vi. who had conducted thether y arme of the king of Fraunce: the same Fortresse, was all full of places, to retire out of one into an other: for that there was first the keepe, from the same to the Fortresse, was a ditch after such sort, that they passed ouer it by a draw Bridge: the Fortresse was dyuided into thre parts, and euery part was deuied from the other with Ditches, and with water, and by Bridges they passed from the one place to the other: wherefore the Duke battered with his artillerie, one of the partes of the Fortresse, and opened part of the wall: For which cause Maister John Casale, which was appointed to that Warde, thought not  
god

good to defend that breach, but abandoned it for to retire himselfe into the other places: so that the Dukes men hauing entered into that part without encounter, in a sodaine they gotte it all: for that the Dukes men became Lordes of the bridges, which went from one place to another. They lost then this Fortresse, which was thought inuisible, throught two defaultes, the one for hauing so many retiring places, the other, because euerie retiring place, was not Lord of the bridge thereof. Therefore, the haughtie builded Fortresse, and the litle wil dome of them that defended it, caused shame to the noble enterprise of the countesse, who had thought to haue abidden an army, which neither the king of Naples, nor the Duke of Milaine would haue abidden: and although his inforcementes had no good ende, yet notwithstanding he got that honour, which his valiantnesse had deserued: The which was testified of many Epigrames, made in those dayes in his prayse. Therefore, if I should haue to build a Fortresse I would make the walles strong, and the ditches in the maner as we haue reasoned, nor I would not make therein other, the houses to inhabite, and those I would make weake and low, after such sorte that they should not let him that should stand in the midst of the market place, the sight of all the wall, to the intent that the Captayne might see with the eye, where he may succour: and that euerie man should vnderstand, that the wall and the ditch being lost, the fortresse were lost. And yet when I should make any retiring places, I would make the bridges deuised in such wise, that euery part should be Lord of the bridges of his side, ordaining, that they should fall vpon postes, in the midst of the ditch.

The causes of  
the losse of Fort-  
resse of Fur-  
lie, that was  
thought inui-  
cible.

How houses  
that are in a  
towne of war  
or fortresse  
ought to be  
builded.

¶ Baptiste. You haue said that little thinges now a daies can not be defended, and it seemed vnto mee to haue vnderstood the contrarie, that the lesser  
that



## The seventh Booke of

that a thing were, the better it might be defended.

Frabritio. You haue not vnderſtoode well, becauſe that place cannot be now a daies called ſtrong, where he that defendeth it, hath not ſpace to retire with new ditches, and with new fortifications, ſo that the force of the ordinance is ſo much, that he that truſteth vpon the warde of one wall and of one fortification onely, is deceiued: and becauſe the Bulwarkes ( minding that they paſſe not their ordinary meaſure, ſo that then they ſhould be towneſ and Caſtles ) be not made, in ſuch wiſe that men may haue ſpace within them to retire, they are loſt ſtraight way. Wherefore it is wiſe done to let alone thoſe Bulwarkes without, and to fortifie the entrance of the towne, and to couer the gates of the ſame with tourninges after ſuch ſort, that men cannot go in nor out of the gate by right line: and from the turninges to the gate, to make a ditch with a bridge. Alſo they fortifie the gate, with a Perculliſſe, ſo to be able to put therein their men, when they be iſſued out to fight; and hapning that the enemies purſue them, to auoide, that in the mingling together, they enter not in with them: and therefore theſe be vſed, the which the antiquitie called Cattarratte, the which being let fall, exclude the enemies, and ſaue the friends, ſo that in ſuch a caſe, men can do no good, neither by bridges nor by a gate, the one and the other being occupied with pleaſe of men.

Baptiſte. I haue ſene theſe Perculliſſes that you ſpeake of, made in Almanie of little quarters of wood after the faſhion of a grate of yron, and theſe perculliſſes of ours, be made of planches all maſſine: I would deſire to vnderſtand whereof groweth this difference, & which be the ſtrongest.

Frabritio. I tell you agayne, that the maners and orders of the warre, through out all the world, in reſpect to thoſe of the antiquitie, be extinguiſhed

and

The fortifying  
of the entrance  
of a Towne.

and in Italye they be altogetger lost, for if there bee a thing somewhat stronger then ordinarie, it groweth of the insample of other countries. You might haue vnderstode, and these other may remember, with how much debilitie before, y king Charles of Fraunce in the yere of our saluation a thousand CCCC. xiiii. had passed into Italie, they made the batelmentes not halfe a yard thicke, the lopes, and the flankers were made with a litle opening without, and much within, and with many other faultes which not to be tedious I will let passe: for that easely from thinne battelments the defence is taken away, the flankers builded in the same maner, most easylie are opened: Now of the Frenchmen is learned to make the battelment large and thicke, and the flankers to bee large on the part within, and to drawe together in the middlest of the wall, and then again to ware wider vnto the uttermost part without: this maketh that the ordinaunce hardly can take away the defence. Therefore the Frenchmen haue, manye other deuises like these, the which because they haue not bene seene of our men, they haue not bene considered. Among which, is this kinde of perculles made like vnto a grate, the which is a great deale better then ours: for that if you haue for defence of a gate a masseue perculles as ours, letting it fall, you shutte in your menne, and you can not through the same hurt the enemye, so that he with ares, and with fire, may breake it downe safely: but if it bee made like a grate, you may, it being let downe, through those holes and through those open places, defend it with Pikes, with crosbowes, and with all other kinde of weapons.

Battelments  
ought to be  
large & thicke  
& the flankers  
large within.

Baptiste. I haue seene in Italy an other vse after the outlandish fashion, and this is, to make the carriage of the artillery, with the spokes of y wheele crooked towards the Axeltrae. I would know why they

## The seventh Booke of

make them so : leaning vnto mee that they bee stronger when they are made straight as those of our wheeles.

Fabritio. Neuer beleue that the things that differ from the ordinarie waies, be made by chaunce : and if you should beleue that they make them so , to shewe sayper, you are deceiued : because where strength is necessarie, there is made no count of saynesse : but all groweth, for that they be much surer and much stronger then ours . The reason is this : the cart when it is laden, either goeth euen, or leaning vpon the right, or vpon the left side : when it goeth euen , the wheeles equally sustaine the waight , the which being equally deuided betweene them, doth not burden much, but leaning, it cometh to haue all the paise of the cariage on the backe of that wheele vpon the which it leaneth . If the spokes of the same be straight they will soon break: for that the wheele leaning , y spokes come also to leane, and not to sustaine the paise by the straightnesse of them and so when the cart goeth euen , and when they are least burdened , they come to bee strongest : when the Cart goeth awrye , and that they come to haue most paise, they bee weakest . Euen the contrarie happeneth to the crooked spokes of the French Cartes , for that when the Cart leaning vpon one side pointeth vpon them: because they bee ordinary crooked, they come then to be straight, and to be able to sustaine strongly all the payse, where when the Cart goeth euen , and that they bee crooked, they sustaine it halfe : but let vs tourne to our citie and Fortresse . The Frenchmen vse also for more safegard of the gates of their towne , and for to bee able in sieges more easily to conuey and set out men of them , besides the said thinges, an other deuise, of which I haue not seene yet in Italie any insample : and this is , where they raise on the out side from the ende of the draw brydge two postes , and vpon either  
of



of them they ioyne a beame, in such wise that the one halfe of them comes ouer the bidge, the other halfe with out: then all the same part that commeth without, they ioyne together with small quarters of wodde, the which they set thicke from one beame to an other like vnto a grate, and on the part with in, they fasten to the ende of either of the beames a chaine: then when they will shut the bidge on the out side, they slacke the chaines, and let downe all the same part like vnto a grate, the which comming downe, shutteth the bidge, & when they will open it, they draw the chaines, and the same commeth to rise vp, and they may raise it vp so much that a man may passe vnder it, and not a horse & so much that there may passe horse and man, and shut it againe at ones, so that it falleth and riseth as a window of a battlement. This deuise is more sure than the Warculles, because hardy it may be of the enemye lette in such wise, that it fall not downe, falling not by a right line as the Warculles, which easily may be vnderpropped. Therefore they which will make a citie, ought to cause to be ordained all the saide things: & moreover about the wall, there should not be suffered any ground to be tilled within a mile thereof, nor any wall made, but should be all champaine, where should be neither ditch nor bancke, neither tree nor house, which might let the sight, and make defence for the enemye that incampeth.

Neither tre-  
ditch, wall, til-  
lage, nor any  
kinde of edi-  
fication, ought  
to be within a  
mile of a town  
of warre.

And note, that a Towne, which hath the ditches without, with the bankes higher then the ground, is most weak: for as much as they make defence to the enemye, which assaulteth ther, and letteth him not hurt ther, because easily they may be opened, and geue place to his artillerie: but let vs passe into the Towne. I will not lose so much time in shewing you how that besides the foresaid thinges, it is requisite to haue provision of victuals, and wherewith to

Note.

23b.ii.

fight

## The ſeuenth Booke of

The prouiſion  
that is meete  
to be made for  
the defence of  
a Towne.

fight, ſoꝛ that they be things that euery man vnderſtan-  
deth, and without them, all other prouiſion is vaine: and  
generally two things ought to bee done, to proui-  
de and to take the commoditie from the enemy that hee auails  
not by the things of thy countrey: therefore the ſtraw,  
the beaſtes, the graine, which thou canſt not receiue in-  
to houſe, ought to be deſtroyed. Alſo hee that defendeth  
a Towne, ought to proui-  
de that nothing be done tumultuouſly and diſorderly, and to take ſuch order, that in  
all accidents euery man may know what hee hath to  
doe.

The order that ought to bee taken is thus, that the  
women, the olde folkes, the children and the impotent,  
bee made to keepe within doores, that the Towne may  
be left free to youg and luſty men, whom being armed,  
muſt be diſtributed ſoꝛ the defence of the ſame, appoin-  
ting part of them to the wall, part to the gates, part to  
the principal places of the Citie, ſoꝛ to remedy thoſe in-  
conueniences, that might grow within: an other part  
muſt not bee bound to any place, but be ready to ſuccour  
all, need requiring: and the thing being ordained thus,  
with difficultie tumult can grow, which may diſorder  
thee. Alſo I will that you note this, in the beſieging  
and defending of a Citie, that nothing giueth ſo much  
hope to the aduerſary to bee able to winne a Towne,  
as when hee knoweth that the ſame is not accuſtomed  
to ſee the enemy: ſoꝛ that many times ſoꝛ feare onely  
without other experience of force, cities haue been loſt:  
Therefore a man ought, when hee aſſaulteth a like Ci-  
tie, to make all his oſtentations terrible. On the other  
part hee that is aſſaulted, ought to appoint to the ſame  
part, which the enemy fighteth againſt, ſtrong men  
and ſuch as opinion maketh not afrayde, but wea-  
pons onely: ſoꝛ that if the firſt proſe turne vaine,  
it increaſeth boldneſſe to the beſieged, and then the  
enemy is conſtrained to overcome them wichin, with  
vertue

What incou-  
rageth y ene-  
mie moſt that  
beſiegeth a  
Towne.

What he that  
beſiegeth and  
he that defen-  
deth ought to  
doe.

vertue and reputation. The instrumentes where with the antiquitie defended Townes, were manie: as Balistes, Onagris, Scorpions, Arcubalistes, Fustiballs, Slings, and also those were many with which they gaue assaultes. As Arrieti, Towers, Puscule, Plutai, Clincey, Falci, Testudeni, in steede of which things bee nowe a dayes the ordinance, the which serue him that besiegeth, and him that defendeth: and therfore I will speake no further of them: But let vs returne to our reasoning, and let vs come to particular offences. They ought to haue care not to bee taken by famine, and not to bee overcome through assaultes: concerning famine, it hath bene told, that it is requisite before y<sup>e</sup> siege come to be well provided of victuals. But when a Towne through long siege, lacketh victualles, sometimes hath beene scene used certaine extraordinary wayes to be provided for their friendes, whom would saue them, in especiall if through the middlest of the besieged Citie there runne a riuer, as the Romanes victualed their Castle called Casalino besieged of Anniball, whom being not able by the riuer to send them other victual then Futs, whereof casting in the same great quantitie, the which carried of the riuer, without being able to bee letted, fedde long time the Cassalinians. Some besieged, for to shew vnto the enemye, that they haue graine more then enough and for to make him to dispaire, that hee cannot, by famine overcome them, haue cast bread out of the Gates, or giuen a Bullocke graine to eate, and after haue suffered the same to bee taken, to the intent that kilde and found full of graine, might shew that abundance which they had not. On the other part excellent Captaines haue used sundry wayes to weary the enemye.

Fabius suffered them whom he besieged, to sow their fieldes, to the intent they should lacke the same coyne, which they sowed.

Aduertisements  
for a besieged  
Towne.

How the Romanes  
vitraled  
Casalino, be-  
sieged of An-  
ball.

A policie for  
the besieged.

A policie of  
Fabius, in be-  
sieging of a  
Towne.



## The seuenth booke of

A policie of  
Dionisius in  
besieging of a  
Towne.

Dionisius being in campe at Reggio, fained to minde to make an agreement with them, and during the practise thereof, he caused himselfe to be provided of their victualls, and then when he had by this meane got from them their graine, he kept them straight and famished them.

How Alexander  
wan Leucadia.

Alexander Magnus minding to winne Leucadia overcame all the Castells about it, and by that meanes drining in the same Citie a great multitude of their owne countrie men, famished them.

The besieged  
ought to take  
heed of y first  
brunt.

Concerning the assaultes, there hath bene told that chiefly they ought to beware of the first brunt, with which the Romanes got often times many townes, assaulting them suddenly, and on euery side: and they called it, Aggredi vrbein corona. As Scipio did when he wan new Carthage in Hispanie: the which brunt if of a towne it bee withstoode, with difficultie after will bee overcome: and yet though it should happen y the enemy were entred into the citie, by overcoming the wall, yet the townes men haue some remedie, so they forsake it not: for as much as many armies through entring into a towne, haue bene repulced wth shame: the remedie is, that the townes men do keepe themselves in high places, and from the houses, and from the towers to fight with them: the which thing, they y haue entered into y citie, haue deuised to overcome in two maners: y one with opening the gates of the citie, and to make the way for the towns men, that they might safely flee: the other with sending forth a proclamation, that signifieth that none shall be hurt but the armed, & to them that cast their weapons on the ground, pardon shall be graunted: the which thing hath made easie the victory of many Cities.

The remedie  
that townes  
men haue when  
the enemies  
are entered  
into the town.

How to make  
the townes men  
yeeld.

How townes  
or cities are  
easily wonne.

Besides this, the Cities are easy to be wonne, if thou come vpon them vnawares: which is done being with thy armie farre of, after such sort, that it be not

not beleued, either that thou wilt assault them, or that thou canst do it, without comming openly, because of the distaunce of the place: wherefore, if thou secretly and speedely assaulte them, almost alwaies it shall follow, that thou shalt get the victorie. I reason unwillingly of the thinges succeeded in our time, for that to mee and to mine, it should be a burthen, & to reason of other, I cannot tell what to saye: notwithstanding, I cannot to this purpose but declare, the insample of Caesar Borgia, called Duke Valentine, who being at Rocera with his menue, vnder colour of going to bessege Camerino, tourned towards the state of Arbin, and got a state in a day and without any paine, the which an other with much time and cost, should scant haue gotten. It is conuenient also to those, that be besieged, to take heede of the deceiptes, and of the policies of the enemye, and therefore the besieged, ought not to trust to any thing, which they see the enemye do continually, but let them beleue alwaies, that it is vnder deceipt, and that he can to their hurt vary it. Domitio Caluino besieging a towne, vsed for a custome to compasse aboute euerie day, with a good part of his men, the wall of the same: whereby the Townes men, beleuing that he did it for exercise, slackt the Warde: wherof Domitius being aware, assaulted and overcame them.

How Duke Valentine got the Citie of Urbine.

The besieged ought to take heed of deceipts & policies of the enemye.

How Domitio Caluino won a towne.

Certaine Captaines vnderstanding, that there should come aide to the besieged, haue apparreled their Souldiours, vnder the Ansigne of those, that should come, and being let in, haue gotte the Towne.

A policie to get a towne.

Simon of Athens, set fire in a night on a Temple, which was out of the Towne, wherefore the Townes men going to succour it, left the town in pray to the enemye. Some haue slayne those, which from the besieged Castle, haue gone a foraging, and haue apparreled their Souldiours, with the apparel of the foragers, whom after haue gotte the Towne. The ancient

How Simon of Athens won a towne.

A policie to get a towne.

## The ſeuenth booke of

How Scipio  
got certaine  
caſtles in A-  
frica.

cient Captaines, haue alſo uſed diuers waies, to de-  
ſtroy the Garrifon of the towne, which they haue ſought  
to take. Scipio being in Africa, and deſiring to get cer-  
taine Caſtles, in which were put the Garrifons of Car-  
thage, he made many times, as though he would aſſault  
them, albeit, he ſained after, not onely to abſtaine, but  
to goe away from them for feare: the which Anibal be-  
leeuing to be true, for to purſue him with greater force,  
and for to be able moze eaſily to oppreſſe him, drew  
out all the garrifons of them: The which Scipio know-  
ing, ſent Maſimila his Captayne to overcome them.

How Pirrus  
winne y chief  
citie of Scla-  
uonie.

Pirrus making warre in Sclauonie, to the chiefe  
Citie of the ſame countrie, where were brought many  
menne in Garrifon, ſained to diſpayre to be able to  
winne it, and tourning to other places, made that the  
ſame for to ſuccour them, emptied it ſelfe of the ward,  
and became eaſie to be wonne. Many haue corrupted  
the water, and haue tourned the riuers an other way  
to take Townes. Alſo the beſieged, are eaſily made  
to yelde themſelues, making them aſtreaied, with ſig-  
nifying vnto them a victorie gotten, or with new aides,  
which come in their diſſauour. The olde Captaines  
haue ſought to get townes by treaſon, corrupting ſome  
within, but they haue uſed diuers meanes. Some  
haue ſent a man of theirs, which vnder the name  
of a fugitiue, might take authoritie and truſt with  
the enemies, who after haue uſed it to their profit.

How to get a  
Towne by  
treason.

A policie of  
Anibal for the  
betraying of  
a Caſtle.

Some by this meanes, haue underſtood the maner of  
the watch, and by meanes of the ſame knowledge,  
haue taken the Towne. Some with a Cart, or with  
Beames vnder ſome colour, haue letted the gate, that  
it could not be ſhutte, and with this way, made the  
entrie eaſie to the enemy. Aniball perſwaded one, to  
giue him a Caſtle of the Romanes, and that he ſhould  
ſayne to go a hunting in the night, making as though  
he could not goe by day, for feare of thy enemies, and tour-



tourning after with the司空son, should put in with him certaine of his men, and so killing the watchmen, should giue him the gate. Also the besieged are beguiled, with drawing them out of the Towne, and going away from them, sayning to flie when they assault the. And many (among whom was Aniball) haue for no other intent, let their Campe to be taken, but to haue occasion to gette betwene them and home, and to take their Towne. Also, they are beguiled with sayning to departe from them, as Formion of Athens did, who hauing spoyled the countrie of the Calcidensians, receiued after their ambassadours, filling their Citie with faire promises, and hope of safetie, vnder the which as simple prei, they were a litle after of Formion oppressed. The besieged ought to beware of the men, which they haue insuiped amongst them: but some times they are wont, as well to assure themselves with deserte, as with punishment. Marcellus knowing how Lucius Bancius a Polane, was tournd to fauour Aniball, so much humanitie and liberalitie, he used towarde him, that of an enemye, he made him most friendly. The besieged ought to vse more diligence in the ward, when the enemye is gone from them, then when he is at hand. And they ought to warde those places, which they thinke, that may be hurt least: for that in mie to wnes haue bene lost, when the enemye assaulteth it on the same part, where they beleue not possible to be assaulted. And this deceipt groweth of two causes, either for the place being strong, and to beleue y<sup>t</sup> it is inuincible, or th<sup>o</sup>ough craft being v<sup>s</sup>ed of the enemye, in assaulting them on one side with faim<sup>d</sup> harons, and on the other without noise, and with very assaultes in dede: and therefore the besieged, ought to haue great aduertisemet, and aboue all thinges at all times, and in especially in the night to make good watches to be kept on the walles, and not onely to appoint men, but Dogges, and such

How the besieged may be begiled.

How Formion ouercame the calcidensians.

What the besieged must take heede of.

Liberalitie maketh enemics friends.

The diligence that the besieged ought to vse in their watch and warde.

## The seventh Booke of

fiere Pastimes, and lively, the which by their sent may descrie the enemie, and with barking discover him: and not Dogges onely, but Cæse haue bene seene to haue saued a citie, as it happened to Rome, when the Frenchmen besieged the Capitoll.

An order of  
Alcibiades  
for the dew  
keping of  
watch & ward.

Alcibiades soz to see, whether the warde watched, Athenes being besieged of the Spartaynes, or dayned that when in the night, he should lift vp a light, all the warde should lift vp likewise, constituting punishment to him that obserued it not.

Thucrates of Athens killed a watchman, which slept, saying, that he left him as he found him. Those that haue bene besieged, haue vsed diuers meanes, to sende aduise to their friends: and minding not to sende their message by mouth, they haue written letters in Cifers, and hidden them in sundrie wise: the Cifers be according, as pleaseth him that ordaineth them, the manner of hiding them is diuers. Some haue written within y<sup>e</sup> scarberd of a sword: other haue put the letters in an unbaked lofe, & after haue baked the same, and given it soz meate to him that caried them. Certain haue hidden the, in the secrettest place of their bodies: other haue hidden them in the collour of a Dog, that is familiar with him, which carrieth them. Some haue written in a letter ordinary things, & after betwene the one line & the other, haue also writt with water, that wetting it or warming it after, the letters should appeare. This waie hath ben most politikely obserued in our time: where some minding to signifie to their friendes inhabiting within a towne, thinges to be kept secret, & minding not to trust any person, haue sent common matters written, according to the common vse and enterlined it, as I haue saide aboue, and the same haue made to be hanged on the gates of the Temples, the which by counterfignes being knowne of those, vnto whome they haue bene sent, were taken of and read; the which way

The secret  
conueighing  
of letters.

is

is most politike, because he that carrieth them may bee beguiled, and there shall happen him no perill. There be most infinite other waies, which every man may by himselfe reade and finde: but with moze facilitie, the besieged may be written vnto, then the besieged to their friendes without, for that such letters cannot bee sent, but by one, vnder colour of a fugitive, that cometh out of a Towne, the which is a dangerous and perillous thing, when the enemy is any whit craftie: But those that sende in, he that is sent, may vnder many colours, goe into the campe that besiegeth, and from thence taking conuenient occasion, may leape into the towne: but let vs come to speake of the present winning of Townes. I say, that if it happen, that thou be besieged in the Citie, which is not ordained with ditches within, as a litle before we shewed, to mind that the enemy shall not enter through the breach of the wall, which the artillerie maketh: because there is no reuerdie to let the same from making of a breach, it is therefore necessary for thee, whilst the ordinaunce batteth, to cast a ditch within the wall which is battered, and that it be in breadth at least two and twentie yardes and a halfe, and to throw all the same that is digged towards the Towne, which may make a bancke, and the ditch more deeper: and it is conuenient for thee, to sollicitate this worke in such wise, that when the wall falleth, the ditch may be digged at least, foure or five yardes in depth: the which ditch is necessarie, while it is a digging, to shutte it on euery side with a slaughterhouse: and when the wall is so strong, that it geneth thee time to make the ditch and the slaughter houses, that battered part, cometh to be much stronger, then the rest of the citie: for that such fortification, cometh to haue the forme, of 3 ditches which we deuised within: but when the wall is weake, and that it geneth thee not time, to make like fortification, then strength

The defence  
against a  
breach.



## The seventh Booke of

How the antiquitie got  
tounes by min-  
ing vnder  
ground.

The remedie  
against caues  
or vnder min-  
ings.

baliauntnesse must be shewed, setting against the enemies armed men, with all thy force. This maner of fortification was obserued of the Pisans, when you besieged them, and they might do it, because they had strong walles, which gaue them time, the earth being soft and most meete to raise by bankes, and to make fortifications: where if they had lacked this commoditie, they should haue lost the Towne. Therefore it shall be alwaies prudently done, to prouide afore hand making ditches within the Citie, and throughout all the circuite thereof, as a litle before we deuised: for that in this case, the enemy may safely be taried for at leasure, the fortifications being readie made. The antiquity many times got tounes, with minning vnder ground in two maners, either they made a way vnder ground secretly, which risse in the towne, and by the same entered, in which maner the Romanes tooke the citie of Uicenti, or with the minning, they ouerthrew a wall, and made it ruinate: this last way is now a dayes most strong, & maketh that the cities placed high, be most weake, because they may better be vnder mined: & putting after in a Caue of this Gunne powder, which in a moment kindleling, not onely ruinateth a wall, but it openeth the hilles, and vtterly dissolneth the strength of them.

The remedie for this, is to build in the plaine, and to make the Ditch that compasseth thy Citie, so deepe, that the enemy may not digge lower then the same, where he shall not finde water, which onely is enemy to the Caues: for if thou be in a towne, which thou defendest on a high ground, thou canst not remedie it otherwise, then to make within thy walles many deepe Welles, the which be as downers to the same Caues, that the enemy is able to ordaine against thee. An other remedie there is, to make a Caue against it, when thou shouldest bee alware where hee minneth, the which way easily hindereth him, but difficultlie  
it

it is forseeene, being besieged of a craftie enemye. Doe that is besieged ought, aboue all thinges to haue care, not to be oppressed in the time of rest: as is after a battaile fought, after the watch made, which is in the Morning at breake of the day, and in the Euening betwene day and night, and aboue all, at meale times: in which time many towne haue bene wonne, and armies haue bene of them within ruinated: therefore it is requisite with diligence on all parts, to stand allwaies garded, and in a good part armed. I will not lacke to tell you, how that, which maketh a Citie or a campe difficult to be defended, is to be driuen to keepe sundryed all the force that thou hast in them, so that the enemye being able to assault thee at his pleasure altogether, it is conuenient for thee on euery side, to garde euery place, and so he assaulteth thee with al his force and thou with part of thine defendest thee. Also, the besieged may be overcome altogether, he without cannot be, but repulsed: wherefore many, whom haue bene besieged, either in a Campe, or in a Towne, although they haue bene inferiour of power, haue issued out with their men at a sodaine, and haue overcome the enemye. This Marcellus of Pola did: this did Caesar in Fraunce, where his Campe being assaulted of a most great number of Frenchmen, and seeing himselfe not able to defend it, being constrained to deuide his force into many parts, and not to be able standing within the listes, with violence to repulse the enemye: he opened the Campe on the one side, and turning towardes the same part with all his power, made so much violence against them, and with so much valiantnes, that he vanquished any overcame them. The constancie also of the besieged, causeth many times displeasure, and maketh afraid them that do besiege. Pompei being against Caesar, and Caesars armie being in great distresse through famine, ther was brought of his bread to Pompei, whom seeing it made of

What care the besieged ought to haue

What maketh a citie or cape difficulte to be defended.

By what means they that besiege are made afraid.

## The seventh Booke of

Honour got  
by constancie.

grasse, commaunded, that it should not be shewed vn-  
to his armie, least it should make them afraid, seeing  
what enemies they had against them. Nothing caused  
so much honour to the Romanes in the warre of A-  
niball, as their constancie: for as much as in what so  
euer enuious, and aduerse fortune they were troubled,  
they neuer demanded peace, they neuer made any  
signe of feare, but rather when Aniball was about  
Rome, they sold those fieldes, where hee had pitched his  
Campe, dearer then ordinarie in other times should  
haue bene sold: and they stode in so much obstinacie in  
their enterprises, that for to defend Rome, they would  
not raise their campe from Capua, the which in the  
very same time that Rome was besieged, the Romanes  
did besiege.

I know that I haue tolde you of many thinges,  
the which by your selfe you might haue vnderstood, and  
considered, notwithstanding I haue done it (as to day  
also I haue told you) for to be able to shew you better  
by meane thereof, the qualitie of this armie, and also  
for to satisfy those, if there be any, whom haue not had  
the same commoditie to vnderstand them as you. For  
me thinkes that there resteth other to tell you, then cer-  
taine generall rules, the which you shall haue most fa-  
milier which be these.

Rules of warre

The same that helpeth the enemy, hurteth thee: and  
the same that helpeth thee, hurteth the enemy.

He that shall be in the warre most vigilant to obserue  
the deuises of the enemy, and shall take most paine to  
exercise his armie, shall incurre least perills, and may  
hope most of the victorie.

Neuer conduct thy men to fight the field, if first thou  
hast not confirmed their mindes & knowest them to bee  
without feare, & to be in good order: for thou oughtest ne-  
uer to enterprise any dangerous thing with thy sol-  
diours, but when thou seest, that they hope to ouercome.

It



It is better to conquere the enemy with famine, then with yron: in the victory of which, fortune may do much more than valiantnesse.

No purpose is better then that, which is hid from the enemy untill thou haue executed it.

To know in the warre how to vnderstand occasion, and to take it, helpeth more then any other thing.

Nature breedeth selue strong men, the industrie and the exercise maketh many.

Discipline may do more in warre, then furie.

When any depart from the enemies side for to come to serue thee, when they be faithfull, they shalbe vnto thee alwaies great gaines: for that the power of the aduersaries are more diminished with the losse of them, that runne away, then of those that be slaine, although that y name of a fugitiue be to new friendes suspected, to old odious.

Better it is in pitching the feld, to reserue behind the first front ayde ynough, then to make the front bigger to disperse the souldiours.

He is difficultly overcome, which can knowe his owne power and the same to the enemy.

The valiantnesse of the souldiours auayleth more then the multitude.

Some times the situation helpeth more then the valiantnesse.

New and sudden things, make armies afrayed.

Slow and accustomed thinges, be little regarded of them. Therefore make thy armie to practise & to know with small fightes a new enemy, before thou come to fight the feld with him.

He that with disorder followeth the enemy after that he is broken, will do no other, then to become of a conquerour a loser.

He that prepareth not necessarie victuals to liue vpon, is overcome without yron.

He

## The seventh Booke of

He that trusteth more in horsemen then in footemen, or more in footemen then in horsemen, must accommodate himselfe with the situation.

When thou wilt see if in the day there be comen anie spie into the Campe, cause euerie man to go to his lodging.

Change purpose, when thou perceimest that the enemy hath foreseene it.

Consult with many of those thinges, which thou oughtest to do, the same that thou wilt after do, conferre with few.

How to consulte.

Souldiours when they abide at home, are maintained with feare and punishment, after when they are lead to the warre, with hoppe and with reward.

Good Captaines come neuer to fight the fildes, except necessitie constraineth them, and occasion call them.

Cause that the enemies know not, how thou wilt order thy army to fight, and in what so euer manner that thou ordainest it, make that the first band may be receiued of the second and of the third.

In the fight neuer occupie a battaile to any other thing, then to the same, for which thou hast appointed it if thou wilt make no disorder.

The sodaine accidentes, with difficultie are remedied: those that are thought vpon, with facilitie.

Men, yron, money, and bread, be the strength of the warre, but of these foure, the first two be most necessary: because men and yron, finding money and bread: but bread and money finde not men and yron.

What thinges are y strength of the warre.

The unarmed rich man, is a bootie to the poore souldiour.

Accustome the souldiours to dispise delicate liuing, and laciuous apparell.

This is as much as happeneth mee generally to remember you, and I know that there might haue bene sayde manie other thinges in all this my reasoning:

as should be, how and in how many kinde of waies the antiquitie ordered their bandes, how they apparelled them, and how in many other thinges they exercised them, and to haue ioyned here vnto many other particulars, the which I haue not iudged necessary to shew, as wel for that you your selfe may see them, as also for that my intent hath not bene to shew iust how the olde seruise of warre was appointed, but how in these daies a seruise of warre might be ordained, which should haue more vertue then the same y is vsed. Wherefore I haue not thought good of the auncient thinges to reason other, then that, which haue iudged to such introduction necessary. I know also that I might haue delated more vpon the seruise on horsebacke, and after haue reasoned of the warre on the Sea: for as much as he that distinguisheth the seruise of warre, sayeth, how there is an armie on the sea, and of the land, on foote, & on horsebacke. Of that on the sea, I will not presume to speake, for that I haue no knowledge thereof: but I will let the Genoues, and the Venecians speake thereof, whom with like studies haue heretofore done great thinges.

Also of horses, I will speake no other, then as afoze I haue said, this part being (as I haue declared) least corrupted. Besides this, the footemen being well ordained, which is the puissance of the armie, good horses of necessitie will come to be made.

Onely I counsell him that would ordaine the exercise of armes in his owne countrie, and desireth to fill the same with good horses, that he make two provisions: the one is, that he distribute Hares of a good race through his dominion, and accustome his menne to make choise of coltes, as you in this countrie make of Calues and Oxen: the other is: that to thentent the excepted might finde a byer, I would prohibit that no man should keepe a Oxle except hee would keepe a horse: so that he that would keepe but one beast to

Do.

ride

Provisions  
that may be  
made to fill a  
Realme full of  
good horse.



## The seventh Booke of

The know-  
ledge y<sup>e</sup> a Cap-  
taine ought to  
haue.

ride on, should be constrained to keepe a horse: & more-  
ouer that no man should weare fine cloath except hee  
which doth keepe a horse: this order I vnderstand hath  
bene deuised of certaine Princes in our time, whome  
in short space haue thereby, brought into their country  
an excellent number of good horses. About the other  
thinges, as much as might be looked for concerning  
horse, I remit to as much as I haue said to day, and to  
that which they vse. Peraduenture also you would de-  
sire to vnderstand what conditions a Captaine ought to  
haue: whereof I shall satisfie you most briefly: for  
that I cannot tell how to chuse any other man then the  
same, who shuld know how to do all those thinges which  
this day hath ben reasoned of by vs: the which also should  
not suffice, when he should not know how to deuise of  
himselfe, for that no man without inuencion, was euer  
excellent in any science: and if inuencion causeth honour  
in other thinges, in this aboue all, it maketh a man ho-  
norable: for euerie inuencion is scene, although it were  
but simple, to be of wyters celebrated: as it is scene  
where Alexander Magnus is praised, who for to re-  
moue his Campe most secretly, gaue not warning with  
the Trumpeete, but with a hatte vpon a Lance. And  
was praised also for hauing taken order that his souldi-  
ours in buckeling with the enemies, should kneele with  
the left legge, to be able more strongly to withstand  
their violence: the which hauing given him the victo-  
ry, it got him also so much praise, that all the images, which  
were created in his honour, stode after the same fashon.  
But because it is time to finish this reasoning, I will  
tourne againe to my first purpose, and partly I shal a-  
uoid the same reproch, wherein they vse to condemne  
in this towne, such as knoweth not when to make an  
ende.

The auctor  
retourneth to  
his first pur-

If you remember Cosimus, you told me, that I  
bearing of one side an exalter of the antiquitie, and a dis-  
praiser

praiser of those, which in waightie matters imitated them not, and of the other side, I hauing not in y<sup>e</sup> affairs of warre, wherein I haue taken paine, imitated them, you could not perceiue the occasion: wherunto I answered, how that men which will do any thing, must first prepare to know how to do it, for to bee able, after to vse it, when occasion permitteth: whether I do know how to bring the seruiss of warre to the auncient maners or no, I will be iudged by you, which haue heard me vpon this matter long dispute: wherby you may know how much time I haue consumed in these studies: and also I beleene that you may imagine, how much desire is in me to bring it to effect: the which whether I haue bene able to haue done, or that euer occasion hath bene giuen me, most easilie you may coniecture: yet for to make you more certaine and for my better iustification, I will also alledge the occasions: and as much as I haue promised, I wil partly performe, to shew you the difficultie and the facilitie, which bee at this present in such imitations.

pose, and maketh a little discourse to make an ende of his reasoning.

Therefore I say, how that no need: that is done now a dayes among men, is more easilie to be reduced into the auncient maners, then the seruiss of warre: but by them onely that bee Princes of so much state, who can at least gather together of their owne subiects 15. or twentie thousand young men: otherwise, no thing is more difficulte, then this, to them which haue not such commoditie: and for that you may the better vnderstand this part, you haue to know, how that there be of two condicions, Captaynes to be praysed: The one are those, that with an armie ordained through the naturall discipline thereof, haue done great thinges, as were the greater part of the Romanes Citizens, and such as haue lead armies, the which haue had no other paine, then to maintaine them Good, and to see them guyded safely: the other are

A prince may easilie bring to intiere perfectione the seruiss of warre.

Two sortes of captaynes worthie to be praised.

## *The seventh Booke of*

they, which not onely haue had to ouercome the enemy, but before they come to the same, haue bene constrained to make good and well ordered their armie: who without doubt deserue much more praise, then those haue deserued, which with old armies, and good, haue valiauntly wrought. Of these, such were Pelopida, and Epaminonda, Tullus Hostilius, Philip of Macedony father of Alexandar, Cyrus king of the Persians, Gracchus a Romane: they all were diuised first to make their armies good, and after to fight with them: they all could do it, as well through their prudence, as also for hauing subiectes whom they might in like exercises instruct: nor it should neuer haue bene otherwise possible, that any of them, though they had bene neuer so good and full of all excellencie, should haue bene able in a straunge countrie, full of men corrupted, not vsed to any honest obedience, to haue brought to passe any laudable worke. It suffiseth not then in Italie, to know how to gouerne an armie made, but first it is necessary to know how to make it, and after to know how to commaund it: and to do these thinges, it is requisite they be those Princes, whom hauing much dominion, and subiectes ynough, may haue commoditie to do it: of which I cannot be, who neuer commaunded, nor can not commaund, but to armies of straungers, and to men bound to other and not to me: in which if it be possible, or no, to introduce any of those thinges that this day of me hath bene reasoned, I will leaue it to your iudgement. Albeit when could I make one of these souldiours which now a daies practise, to weare more armour then the ordinarie, and besides the armour, to beare their owne meate for two or three dayes, with a mattocke? when could I make them to digge or keepe them euery day many bowes armed, in sained exercises, for to be able after in the very thing in dede to preuaile? When would they abstaine from playe, from  
laciut



laciuousnesse, from swearing, from the insolence, which euery day they commit : When would they be reduced into so much discipline , into so much obedience and reuerence, that a tree full of apples in the middelt of their Campe, should be found there and left vntouched : As is red , that in the auncient armies manie times happened. What thing may I promise them, by meane whereof they may haue me in reuerence , to loue or to feare, when the warre being ended , they haue not any moze to doe with me : Whereof may I make them ashamed, which be bozne and brought vp without shame : Why should they be ruled by me who know me not : By what God or by what saintes may I make them to swear : By those y they worship , or by those that they blaspheme : Who they worship I know not any : but I know well they blaspheme all . How should I beleeue that they will keepe their promise to them, whom euery hower they dispise : How can they that dispise God, reuerence men : Then what god fashion should that bee, which might be expessed in this matter :

And if you should alledge vnto me that Swizzers and Spaniardes be god souldiours , I would confesse vnto you , how they be farre better then the Italians : but if you note my reasoning , and the maner of proceeding of both , you shall see , how they lacke many thinges to ioyne to the perfection of the antiquitie.

And how the Swizzers be made god of one of their naturall vses caused of , that , which to day I told you : those other are made god by meane of a necessitie : for that seruing in a straunge countrie , and seeming vnto them to be constrained either to die , or to ouercome, they perceiuing to haue no place to lie , do become god: but it is a godnesse in many partes faultie : for that in the same there is no other god , but that they bee accustomed to carpe the enemy at the Pike and Swords point : no; that , which they lacke , no man should

## The seuenth booke of

bee mette to teach them, and so much the lesse, hee that could not speake their language.

The author  
excuseth the  
people of Ita-  
lie to the great  
reproch of  
their princes  
for their igno-  
rance in the  
affaires of  
warre.

But let vs tourne to the Italians, who for hauing not had wise Princes, haue not taken any good order: and for hauing not had the same necessitie, which the Spaniards haue had, they haue not taken it of themselves, so that they remaine the shame of the world: and the people be not to blame, but onely their Princes, who haue bene chastised, and for their ignorance haue bene iustly punished, loosing most shamefully their states, without shewing any vertuous ensample. And if you will see whether this that I saye be true: consider how many warres haue bene in Ita'y since the departure of king Charles to this day, where the warre being wont to make men warlyke and of reputation, these the greater and fierfer that they haue bene, so much the more they haue made the reputation of the members and of the heads thereof to be lost. This proueth that it groweth, that the accustomed orders were not nor be not good, and of the newe orders, there is not any which haue knowen how to take them. For neuer belæue that reputation wil be gotten, by the Italians weapons, but by the same waie that I haue shewed, & by meanes of them, that haue great states in Italie: for that this forme may be impressed, in simple rude men, of their owne, and not in malicious, ill brought vp, and straungers. For there shall neuer be found any good mason, which will belæue to be able to make a faire image of a peece of Marble ill helued, but verve well of a rude peece.

A discription  
of y folishnes  
of the Italian  
princes.

Our Italian Princes belæued, before they tasted the blowes of the outlandish warre, that it should suffice a Prince to know by writings, how to make a subtil aunswere, to write a goodly letter, to shewe in sayings, and in wordes, witte and promptnesse, to know how to canuas a fraude, to decke themselves  
with

with precious stones and gold, to sleepe and to eate with greater glozy then other: To kepe many lasciuious persons about them, to gouerne themselves with their subiects, couetously and proudeley: To rote in idlenes, to giue the degrees of the exercise of warre, for god will, to dispuse if any should haue shewed them any laudable waie, minding that their wordes should bee answers of oracles: nor the sely wretches were not aware that they prepared themselves to be a pray to whome so euer should assaulte them. Whereby grew then in the thousand foure hundred and nintie and foure yere, the great feares, the sodaine sightes and y marueilous losses: and so thre most mighty states which were in Italie, haue bene diuers times sacked and destroyed. But that which is worse, is where those y remaine, continue in the very same errour, and liue in the verie same disorder, & consider not, that those who in olde time would keepe their states, caused to be done these thinges, which of me hath bene reasoned, and that their studies were, to prepare y body to diseases, & the minde not to feare perills. Whereby grew that Caesar, Alexander, and all those men and excellent Princes in olde time, were the foremost amongst the fighters, going armed on fote: and if they lost their state, they would lose their life, so that they liued and died vertuously. And if in them, or in part of them, there might bee condemned to much ambition to reason of: yet there shall neuer be founde, that in them is condemned any tenderneffe, or any thing that maketh men delicate and feeble: the which thing, if of these Princes were redde and beleued, it should be impossible, that they should not chaunge their forme of liuing, and their prouinces not to chaunge fortune. And for that you in the beginning of this our reasoning, lamented your ordinaunces, I saye vnto you, that if you had ordained it, as I afore haue reasoned, & it had giuen of it selfe no good experience, you might  
with

Caesar and Alexander, were the foremost in battaile.



## The seventh booke of

The Veneci-  
ans and the  
Duke of Fe-  
rare began to  
haue reduced  
the warfare to  
the auncient  
maners.

He that dispi-  
seth the seruiss  
of warre dil-  
piseth his own  
wealth.

with reason haue bene griued therewith: but if it bee not so ordayned, and exercised, as I haue saide, it may be griued with you, who haue made a counterfaite thereof, and no perfect figure. The Venecians also, and the Duke of Ferrare, began it, and it followed it not, the which hath bene through their default, not through their menne. And therefore I assure you, that whosoever of those, which at this day haue states in Italie, shall enter first into this waie, shall be first, before any other, Lord of his Province, and it shall happen to this state as to the kingdome of the Macedonians, the which coming vnder Philip, who had learned the maner of setting armies in order of Epaminondas a Thebane, became with his order, and with these exercises (whilest the rest of Greece stode in idlenesse, and attended to respite commedes) so puissaunt, that he was able in fewe yerres to possesse it all, and to leaue such foundation to his sonne, that he was able to make himselfe, prince of all the worlde. He then that despiseth these studies, if he be a Prince, despiseth his Princedom: if he be a Citiezin his Citie. Wherefore, I lament mee of nature, the which either ought not to haue made mee a knowler of this, or it ought to haue giuen mee power, to haue bene able to haue executed it: For now being olde, I cannot hope to haue any occasion, to be able so to doe. In consideration whereof, I haue bene liberall with you who being graue young men, may (when the thinges said of me shall please you) at due times in fauoure of your Princes, helpe them and counsaile them, wherein I would haue you not to be afraied, or mistrustfull, because this Province seemes to bee altogether giuen to raise vp againe the thinges deade, as is seene by the perfection that Poesie, painting, and writing, is now brought vnto: Albeit, as much as is looked for of mee, being stroken in yerres, I do mistrust. Where surely, if Fortune had heretofore graunted mee so much state

State, as sufficient for a like enterprise, I would not have doubted, but in most short time, to have shew'd to the world, how much the auncient orders auaille: and without peradventure, either I would have increased it with glory, or lost it without shame.

The ende of the seventh and last booke of the arte of  
warre, of Nicholas Machiauel, Citezen and  
Secretarie of Florence, translated out  
of Italian into English: By  
Peter Whitehorne,  
felow of Graiſe  
Inne.

**Ce.**

## Nicholas



# Nicholas Machiavel, Citezein

And Secretarie of Florence, to  
the Readers.



¶ the intent that such as read this booke  
may without difficultie vnderstand the  
order of the battailes, or bandes of men,  
and of the armies, and lodgings in the  
Campe, according as they in the descrip-  
tion of them are appointed, I thincke it  
necessarie to shew you the figure of euerie one of them :  
wherefore it is requiset first, to declare vnto you, by  
what points and letters, the souldiers, the horsemen, and  
euerie other perticuler member are set forth.

## Know therefore that

T C V R C	{	Target men.	
		Pike men.	
		a Capitaine of ten men.	
		Veliti a ordinarie.	} which are those men that shor with harkabu- ses or bowes.
		Veliti extraordinari	
k H G	{	a Centurion or cap- taine of a hundred men.	
		a Constaple or a captainne of a band of foure hundred and fiftie men,	
		The head capitaine of a maine battaile.	
t d b f m l A	{	The general Capitaine of the whole armie.	
		The Trompet.	
		The Drum.	
		The Ansigne.	
		The Sranderde.	
		Men of Armes.	
	{	Light horsemen.	
		Artillerie or ordinance.	



In the first figure next following, is described the  
foyme of an ordinarie battail or band of foure hundred  
and fittie men, and in what manner it is redoubled by  
flanke. And also how with the very same order of 80.  
ranches of pikes which were the foremost of euery Cen-  
turie, they may likewise in bringing them in battaille  
raie, come to be placed behinde, which may bee done,  
when in marching, the enemies should come to assault  
them at their backes: according as the ordering there-  
of is before declared. fol. 32. fol. 35.

In the second figure is shewed how a battaile or  
band of men is ordered, which in marching should bee  
driven to fight on the flanke: according as in the booke  
is declared. fol. 35.

In the third figure, is shewed how a battaile or  
band of men, is ordered with two homes, fol. 35. and  
after is shewed how the same may be made with a  
voide place in the midst: according as the ordering  
thereof, in the booke most plainly is declared. fol. 36.

In the fourth figure, is shewed the foyme or fashon  
of an armie appointed to fight the battaile with the  
enemies: and for the better understanding thereof, the  
verie same is plainlier set forth in the figure next un-  
to it, whereby the other two figures next following  
may the easier be understood: according as in the booke  
is expessed. fol. 44.

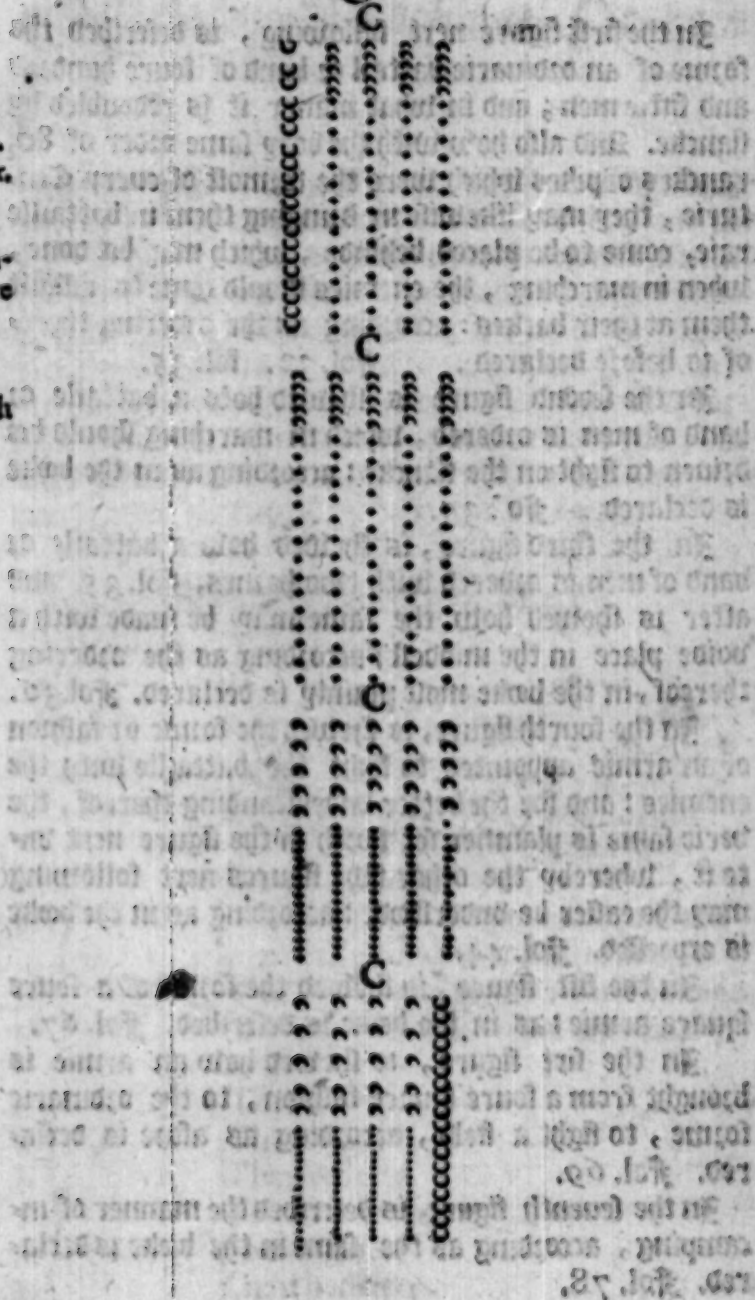
In the fift figure, is shewed the foyme of a foure  
square armie: as in the booke is described. fol. 67.

In the sixt figure, is shewed how an armie is  
brought from a foure square fashon, to the ordinarie  
foyme, to fight a field, according as afore is declar-  
ed. fol. 69.

In the seuenth figure, is described the manner of in-  
camping, according as the same in the booke is declar-  
ed. fol. 78.

# Figure.

This is the  
maner of or-  
dering of 400.  
men into lxxx.  
ranckes, sixe  
to a ranck, to  
bring them in-  
to a iiii. square  
battaile with  
the pikes on  
the front, as  
after folowed



# Figure. 3d F



This is y fore-  
said lxxx. rāks  
of iii. C. men  
brought into  
a foure square  
bataile, with  
the pikes on y  
front.  
And the l. Ve-  
litie on y sides  
and on y back.



*The second*

This is y<sup>m</sup>anner of ordering of CCCC men into 1000 ranks, sue to a rancke, to bring them into a iii. square battaile with the pikes on the side, as after foloweth.

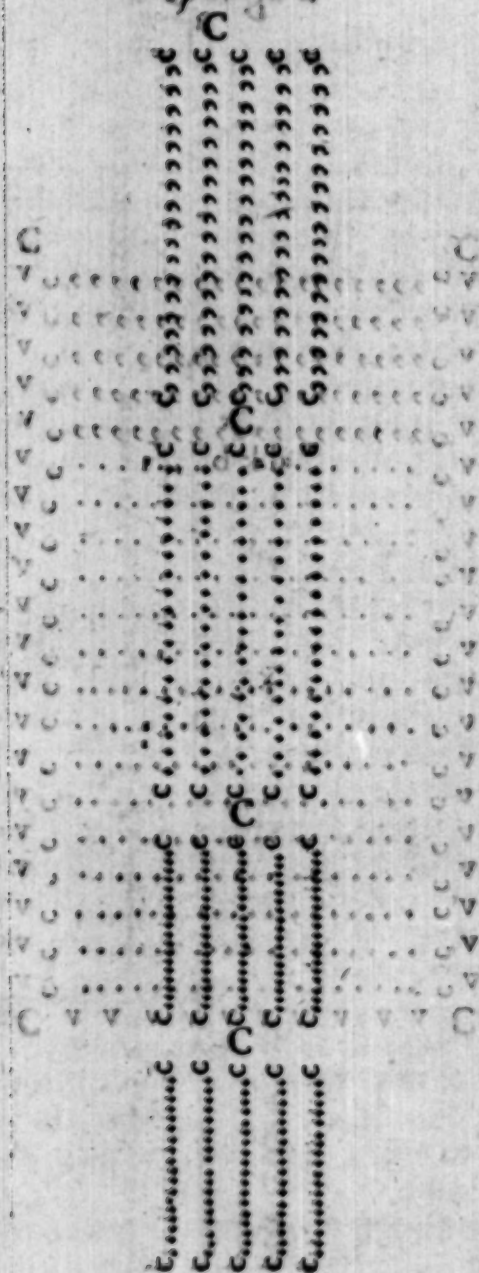
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2002

of the data.

1991

1992



# Figure. 117



This is the fore-  
said lxxx ranks  
of liii. C. men  
brought into  
a foure square  
battaile with  
the p<sup>i</sup> es on  
the side.

# The third

These are the  
numbers or  
ranks appoin-  
ted to make y  
horned battail  
of, & y square  
battaile with  
the void space  
in the middle  
as after folow-  
eth.

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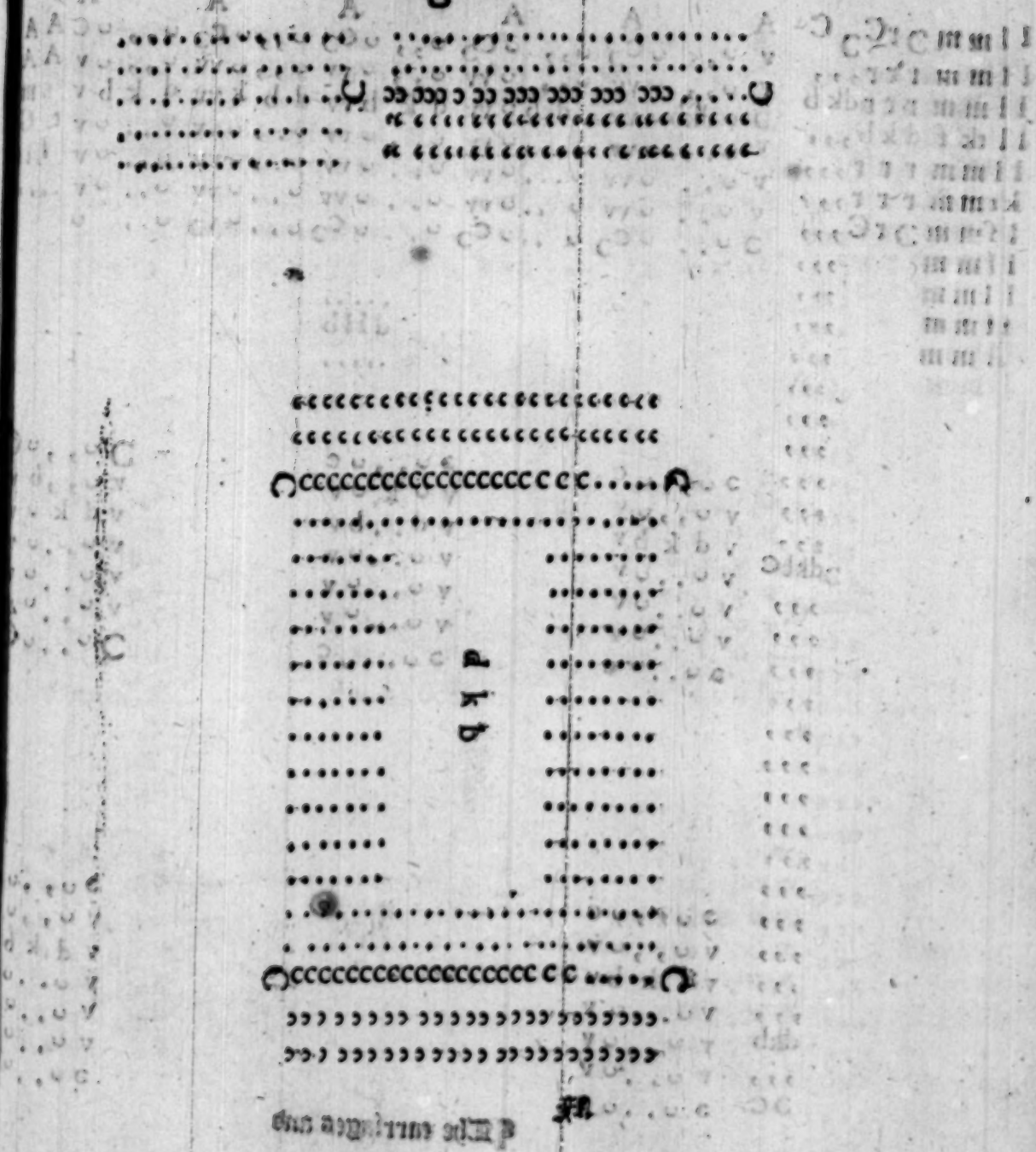
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# Figure.



# THE FOURTH

l l m m r r c c  
l l m m r r r r , , , ,  
l l m m r r r r d k b  
l l k f d k b , , , ,  
l l m m r r r r , , , ,  
k e m m r r r r , , , ,  
l f m m r r c c , , , ,  
l l m m , , , ,  
l l m m , , , ,  
l l m m , , , ,  
l l m m , , , ,

A A A A A A

v u,, u C u,, u C u,, u C u,, u C A A

v u,, u v v u,, u v v u,, u v v u,, u v A A

C u d k b u v v u d k b u v v d k b v v d k b v m

v u,, u v v u,, u v v u,, u v v u,, u v t G

v u,, u v v u,, u v v u,, u v v u,, u v l l l

v u,, u v v u,, u v v u,, u v v u,, u v ...

C u,, u C u,, u C u,, u C u,, u

$$\begin{array}{c} \bullet \bullet \bullet \bullet \\ d H b \end{array}$$
[illegible]

C u, , u C  
 v u, , b v  
 v d k u v  
 v u. . u v  
 v u. . u v  
 v u. . u v  
 C u. . u C

20, 20  
 20, 20  
 20 d k b  
 20, 20  
 20, 20  
 20, 20  
 20, 20

**The carriages and**

# FIGVRE.

A	A	A	A	A	A	
A C u,,	u C u,,	u C u,,	u C u,,	u C u,,	u C	o C o r C m m l l
A v u,,	u v u,,	u v u,,	u v u,,	u v u,,	u v	,,, r r r m m l
m v u d k b	u v u d k b	u v u d k	b v u d b	k v u d k	b v	d k b r r r m m l
f v u..	u v u..	u v u..	u v u..	u v u..	u v	,,, d k b m m l
l l v u..	u v u..	u v u..	u v u..	u v u..	u v	,,, r r r k f l l
.. v u..	u v u..	u v u..	u v u..	u v u..	u v	,,, r r r m m k
o u..	u C u	.. u C u	.. u C u	.. u C u	.. u C	,,, r r r m m f l

....  
d H b  
.....

,,, m m l  
,,, m m l  
,,, m m l  
,,, m m l

o u,, u C  
v u,, u v  
v d k b v  
v u.. u v  
v u.. u v  
v u.. u v  
o u.. u C

o u,, u C  
v u k u v  
v d.. b v  
v u.. u v  
v u.. u v  
v u.. u v  
o u.. u C

o u,, u C  
v u,, b v  
v d k u v  
v u.. u v  
v u.. u v  
v u.. u v  
o u.. u C

o d k b C

o u,, u C  
v u,, u v  
v d k b v  
v u.. u v  
v u.. u v  
v u.. u v  
o u.. u C

o u,, u C  
v u,, u v  
v d k b v  
v u.. u v  
v u.. u v  
v u.. u v  
o u.. u C

d k b  
o C



THE FIFT

[illegible]

# Figure. H T



THE NEXT

[illegible][illegible] $\dot{d}\dot{H}\dot{b}$ 

...  
...  
...  
...  
...

2	0	0	0	C
r	0	0	0	r
r	0	dkb	0	r
r	0	0	0	r
r	0	0	0	r
2	0	0	0	C

2 0 5  
 r c n  
 r c d  
 r c d  
 r c .  
 2 c .

7 0 0 0  
 r 0 0 0  
 r 0 d k b 0 0  
 r 0 0 0  
 r 0 0 0  
 0 0 0 0  
 0 0 0 0  
 0 0 0 0

.....A



# FIGVRE.

A	A	A	A	A
C	C	C	C	C
rr	rr	rr	rr	rr
b, rr, dkb	rr, dkb	rr, dkb	rr, dkb	rr, dkb
rr	rr	rr	rr	rr
rr	rr	rr	rr	rr
C	C	C	C	C

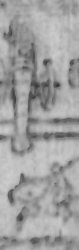
H.  
 m.  
 Gf.  
 . . .

C	C
r	r
kb, r	r, dkb, r
r	r
r	r
C	C

r . . . r dkb  
 r. dkb r vvv  
 r . . . r vvv  
 r . . . r vvv  
 C . . . C vvv  
 C . . . C vvv  
 r . . . r vvv  
 r, dkb, r C

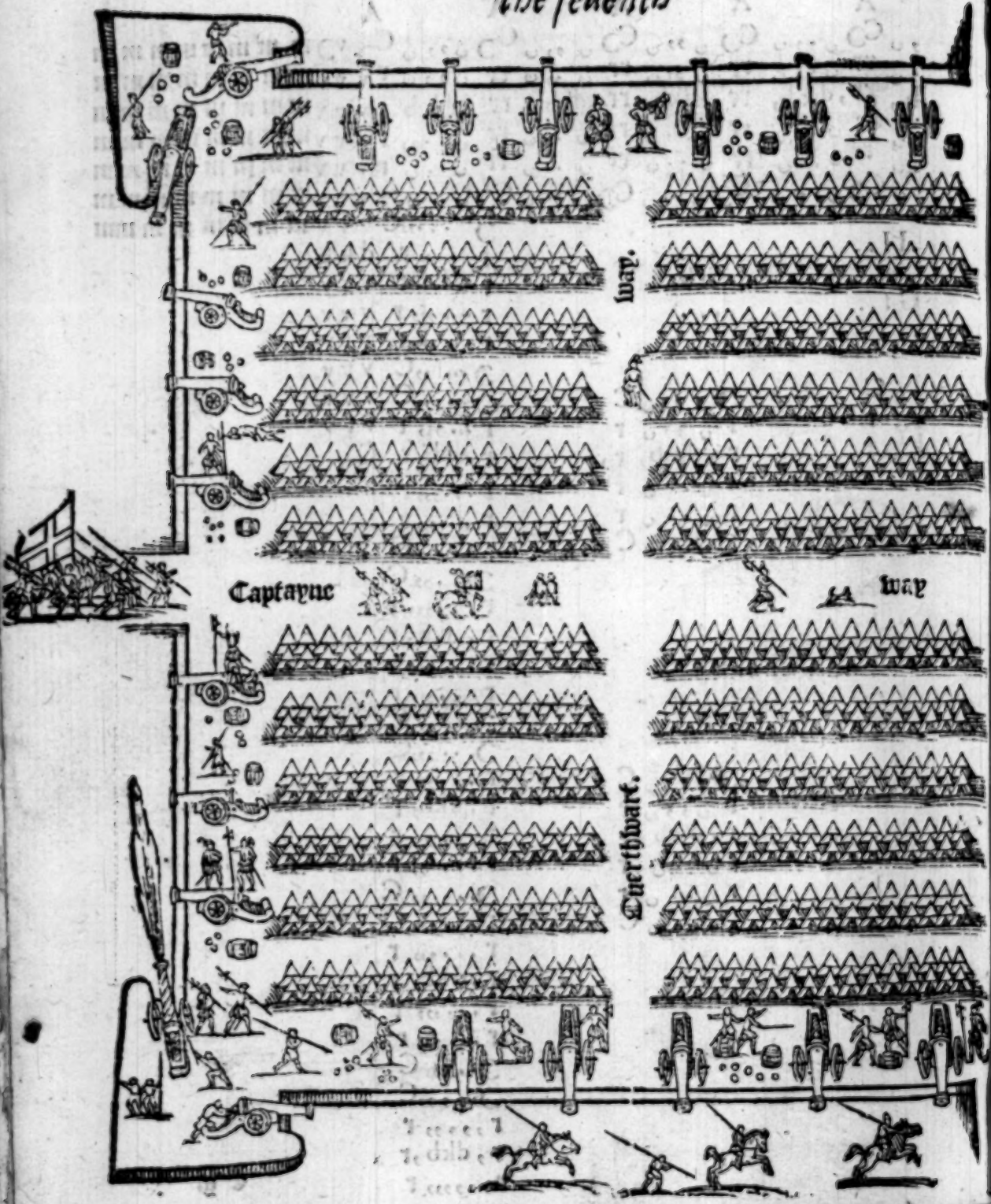
r . . . r  
 r . . . r  
 C . . . C  
 C . . . C  
 r . . . r  
 r, dkb, r  
 r . . . r  
 r . . . r  
 C . . . C  
 C . . . C  
 r . . . r  
 r, dkb, r  
 r . . . r  
 r . . . r  
 C . . . C  
 C . . . C  
 r . . . r  
 r, dkb, r  
 r . . . r  
 r . . . r

C
r
r, dkb, r
r
r
C



r . . . r  
 r, dkb, r  
 r . . . r  
 r . . . r

# the seventh



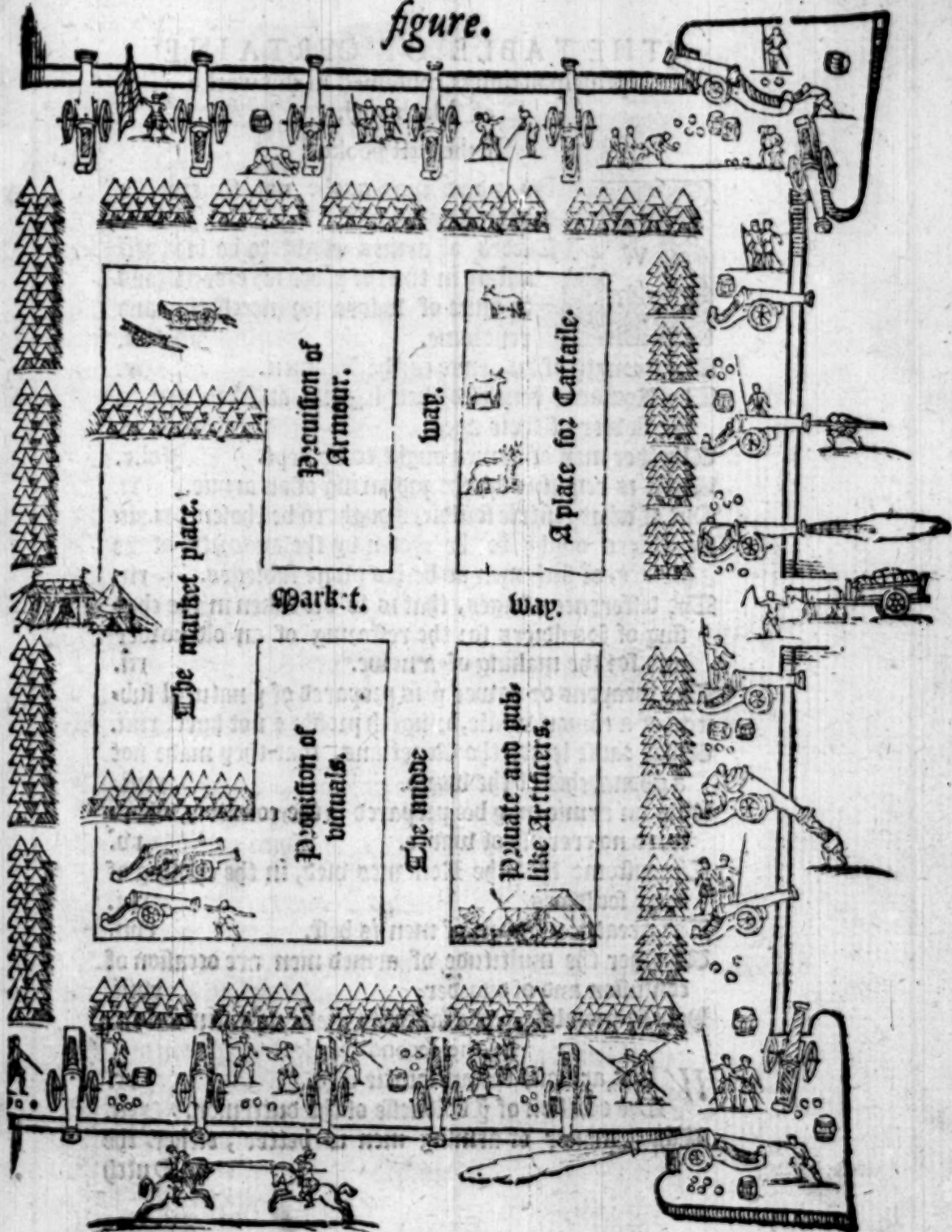
Captayne

way.

way

Quarterward.

figure.





# THE TABLE OF CERTAINE

principall things, contained in this worke  
of Machiauel.

In the first booke.



By a good man ought not to exercise  
warfare as his art. fol.vi.

Deedes of armes ought to be vsed pri-  
uately in time of peace for exercise, and  
in time of warre for necessitie and  
renowme. fol.viii.

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The Romanes renewed their legions and had men in  
the flower of their age. fol. ix.

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Souldiers ought to be chosen by the autoritie of the  
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sing of souldiers for the restoring of an old power  
and for the making of a newe. xii.

The weapons or power y<sup>e</sup> is prepared of y<sup>e</sup> natural sub-  
iects of a comon weale, bringeth profite & not hurt. xiii.

What cause letteth the Venetians, that they made not  
a Monarchie of the world. xiiii.

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were no exercise of warre. xv.

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their souldiers. xvi.

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In the second booke

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Which maner of arming men is better, either the  
Dutch

## The Table.

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Whereof commeth the vtilitie, and the disorder of the armies that are now a daies.	rrxxiii.
The maner of arming men.	cli.
The number of cariages that men of armes and light horsemen ought to haue.	cli.
In the third booke.	
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Cg.iii.	The

## The Table.

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## The Table.

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 to be couragious and bolde. lxv.  
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 onely to the headdes there of. lxvi.

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**T**he maner how to lead an armie going thro-  
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 mie. lxvii.

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How the watch and warde ought to be appointed in the  
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How the Romane prohibited women to be in their ar-  
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How

## The Table.

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are had in suspicion. lxxviii.

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Most excellent aduertisements and poillicies. xci.

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Towne distante from the same. xciv.

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Of the Countes Catherin. xciv.

The fashion of percullesse used in Almane. xcvi.

How the Battelmentes of walles were made at  
the first, and how they are made now adates. xcvi.

The provisions that is meete to be made, for the  
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Divers pollices, for the besieging and defending  
a Towne or Fortresse. xcix.

Secret conveying of Letters. ci.

The defence against a breach. ci.

Generall rules of Warre. cii.

**The end.**



CERTAINE VVAIES  
for the ordering of Souldi-  
*ours in battelray, and setting of bat-*  
tailes, after diuers fashions with their man-  
ner of marching : And also Fugures of cer-  
taine new plattes for fortification of townes;

And moreouer, how to make

Saltpeter, Gounpou-  
der and diuers

sortes

of Fireworkes or wilde Fire,

with other thinges ap-

pertayning to the

warres. Ga-

thered &

set

foorth by *Peter Whiteborne.*

*Imprinted at London by*

Thomas East : for

Ihon Wight.

1588.







# CERTAIN VVALES

for the ordering of Souldi-

ers in battel, and setting of bat-

tailes, after diuers fashions with their man-

ner of marching: And also Figures of cer-

tain new places for fortification or fortities:

And moreover, how to make

Souldiers, Companies,

the said diuers

looses

of fencibles or wilde fenc-

ible, and other things ap-

pertaining to the

warre, &c.

Printed at

the

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Printed at London by

Thomas Hall: for

John Wright

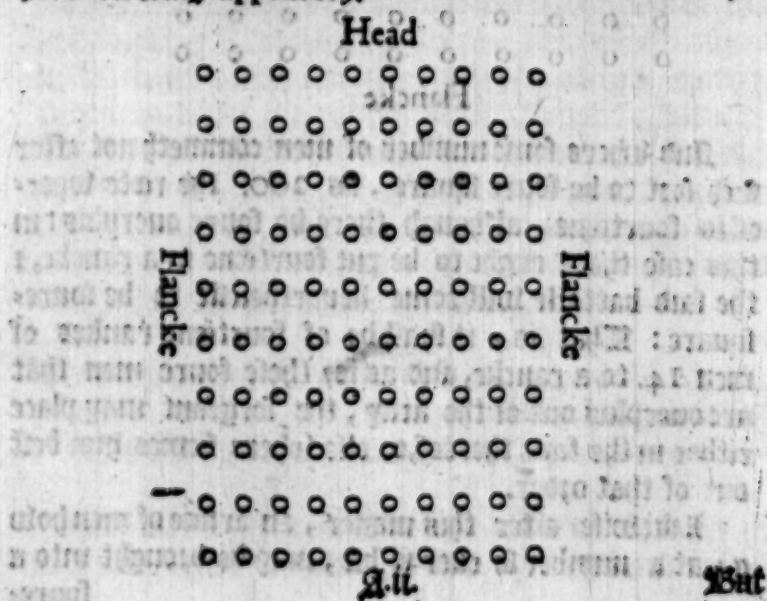
1686



# ¶ A perfect rule to bring men into <sup>2</sup> a square battell, of what number soeuer, they be. Cap. i.

**F**or to make a square battaile  
of a number of men, or of an ar-  
mie, the foure square roote or  
quadrant number of them, must  
be taken and so many as y same  
roote containes, so many ought  
to be set in aray. As for exam-  
ple in a little number, for the  
better vnderstanding thereof:

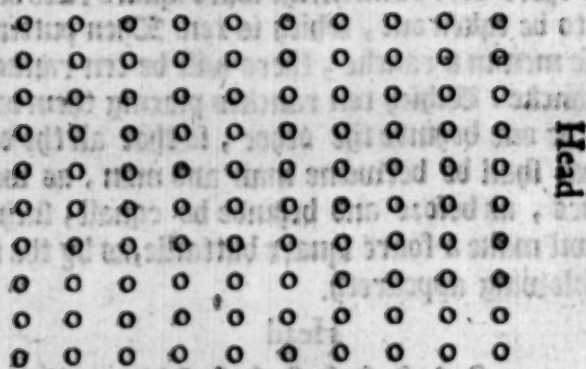
Admit there be 100. men, the foure square roote of 100.  
ought to be taken out, which is ten. Then putting ten  
of these men in a rancke, there will be ten rankes, ten  
to a rancke. Which ten rankes placing them ordina-  
rily, the one behinde the other, so that all the distan-  
ces that shall be betwene man and man, as well on  
the sides, as before and behinde be equall; such 100.  
men will make a foure square battaile, as by the figure  
here folowing appeareth.



*The ordering of Souldiours.*

But for that men ordered in battaill ray, stand not, nor march not, as aboue is supposed, I meane in equall distaunce, for that euerie man (as Vegetius affirmeth) would haue for largenes three fote, that is from shoulder to shoulder, and for length seven fote, that is three fote before him, and three fote behinde him, and one fote that his owne person will occupie, for which cause the aboue written order, men standing according to the said ordinarie distaunce, shall not be a iust soure square, but the length thereof shal be 70. fote, and the breadth 30 fote, as appeareth by the figure following.

## Flancke



## Flancke

And where some number of men cometh not after such sort to be foure square, as 200. the rate whereof is fourtene, although there be foure ouerplus: in this case there ought to be put fourtene in a rancke, & the said battaile will come neuerthelesse to be foure square: That is, it shall be of fourtene rankes of men 14. to a rancke, and as for those foure men that are ouerplus out of the aray; the Sergeant may place either in the taile thereof, or else where seemes him best out of that order.

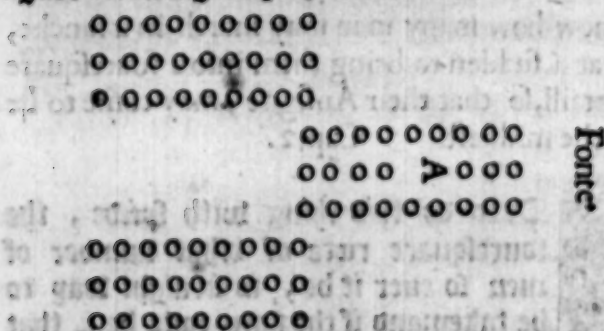
Likewise after this maner, an armie of men how  
great a number so euer it be, may be brought into a  
four.



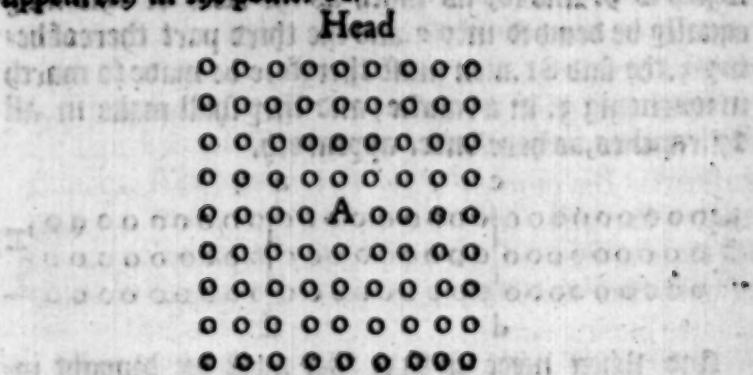


## The ordering of Souldiours.

deuided into three equall partes, as is declared by a, b. and c. d. So that to euery part there come to remaine 9. ranckes, three men in a rancke, and afterward the first part that is in the front must be caused to stay, and the other twaine to procede forwarde, the one on the right hand, and the other on the left hand of the first (now standing still) untill the head or front of either of the said two parts do vnite or come to be euen with the head of the first, and there to stay. As by the figure folowing may be vnderstande.



The which three partes thus brought and ordered, shall make a foure square battaile, as appeareth by this figure folowing: and to cause that the Ansigne do fall in the middest of such a battaile, alwaies it ought to be placed in the middest of the first part, as befoze appeareth in the point. A.



But

But to know how to deuide the said 27. ranckes into thre equall portions without standing to tell nine ranckes, considering that if it were a great number of men, it should be a thing very long so to doe: therefore seeing that to euery number of men, there is commonly placed a rancke of Markabutters or Bowmen in the Forewarde, & an other in the Rereward, in this figure aboue written of four score men and one, there would be 18. Markabutters: that is 9. in the Forewarde, and 9. in the Rereward: and setting two ranckes of Markabutters, in the places wher the diuisions are to be made, as hereafter appeareth in figure, vnderstanding the Markabutters by this letter H.

H 000000000 H 000000000 H H 000000000 H  
 H 000000000 H H 000000000 H H 0000 0000 H  
 H 000000000 H H 000000000 H H 000000000 H

By those Markabutters you may alwaies vnderstand, where the diuisions are to be made of the said 27. ranckes, and likewise in euery other greater number.

And when such a roote cannot bee deuided into thre equall partes, of necessitie there must remaine ouer one or two. Now let vs first take example this, where remaineth ouer one, as it should bee if it were a hundred men, the roote whereof is tenne: which tenne deuided into thre, commeth to thre times thre, and one remaining ouerplus. Therefore there must bee made tenne ranckes to march thre and thre (that is so many ranckes as the number of the roote is of) and other ten ranckes foure and foure together, & the last 10. ranckes also thre and thre together: as here following appeareth with their 20. Markabutters or Bowmen, besides the said hundred men.

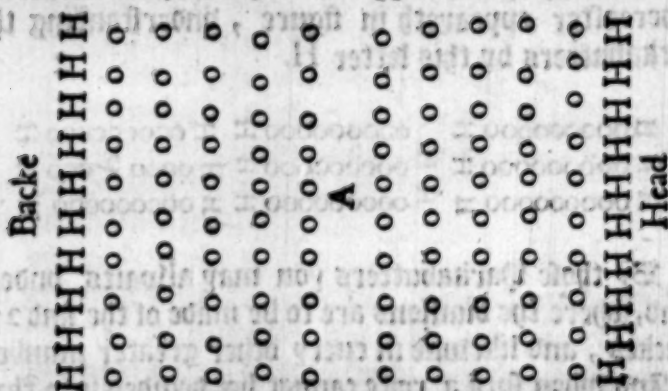
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And



## The ordering of Souldiers

And these three partes when it is needefull to bring them into a fouresquare battaile, must be ordered as aboue is rehearsed, or else causing the first part in the Foreward to stay, and to make the second part to proceede onward. untill the headde or front of the second part come to be euen with the head of the first, and so the said second part standing still, to cause also the third part to proceede foreward after the same maner, the which thing being done, such a battaile shalbe brought into fashion fouresquare, with their Markabutters or Bowmen before & behind: as appeareth by this figure.



But when in deviding the saide rote there shall happen to remaine .2. ouerplus, as should be when there were .121. the rote whereof is .11. which .11. parting into .3. comes to .3. times .3. and two remainyng ouerplus (as I haue saide) in this case and in other like, I would make a .11. rankes to march (that is, as many as the rote containes) .4. menne in a ranke, and an other .11. rankes .3. menne together in a ranke, and the other .11. rankes also .4. men to a ranke: As hereafter appeareth in figure, with their .22. Markabutters, beside the said .121. men.



The which menne alwaies, when they would be brought into a foure square battell, must be ordered as befoze is declared.

And this rule may serue likewise in what littell or greate number so euer it bee, as well quadrant as not quadrant. As for example onely in wordes: put the case that there be. 3969. whereof being minded to know how many men in a rancke should be caused to march together by the way, so that commodiously they may at a soden, be brought into a foure square battell, the must be taken the quadrant roote of this number of menne (by the same way that I haue taught) which shall be found to be 63. so that on euery side of the square battell shall be 63. ranches of menne, and for as much as this roote (which is 63.) may be deuided into 3. equall partes, the third part thereof is to be taken (for a generall rule) that is 21. and therefore 21. menne in a rancke would be made to march together by the way. And alwaies there shall be as many ranches in all after 21. to a rancke, as are three times so many as the roote is of, which is, three times 63. which comes to 189. so that 189. ranches of men shall be the number thereof after 21. to a rancke. And by the roote that is 63. you may understand that such deuision is to be made betwene 63. and 63. so that the first shall be as well 63. part as also the second and the third. In which deuisions the two double ranches of Darkabutters are to be placed for the redier knowledge to bring them into a square battell. But if in deuiding the roote into three, there should remaine 1. ouerplus, as should happen if the presupposed men were. 5776. the roote whereof being 76. which roote deuided into 3. shall come vnto 25. and one to remaine ouerplus. Now I say, that all the ranches that riseth of these men, shall be notwithstanding three times so many as the roote, that is three times, 76. which makes, 228. And for as much as all these

## The ordering of Souldiers

these orders of ranckes, are deuised euermore into 3. partes (as before hath bene declared) 76. ranckes to a part, that is so many as the roote is of) therefore it is to be vnderstood, that the first and the last of these three partes must be made to march 25. men in a rancke, which is as much as the third part of the roote, and for that there remaineth one ouerplus (as aboue appeareth) I say that the same one must be put alwaies in the second part, which is in the midst, I meane causing those of the said second parte, to march 26. men in a rancke, so that the first and the last part of the great reio of ranckes, be 25. men in a rancke, and the second part to be 26. men in a rancke, and the very same ought to be done of euerie other roote that may be deuised into three, wher onely remaineth ouerplus one, but when there remaineth ouerplus 2. it followeth, cleane contrary: For that the first and the last parte would be of one man more, then the same that the third part of the roote is of. As for example if the said men wer 2809. the roote whereof is 53. which deuised into three, comes to 71. and 2. remainig ouerplus: therefore of so many menne, there shall be made 159. ranckes (that is three times 53.) which 159. ranckes deuiding them also into three partes cometh vnto 53. to a part, that is the number of the roote. And the first and third part would be of one man more then the third parte of the roote, that is, it would be of 18. menne to a rancke, and the second part, which is the part in the midst, would be the very third part of the roote: that is, 17. menne to a rancke, so that all the 159. ranckes, as wel the first 53. ranckes, as likewise the last 53. ranckes ought to be of 18. men to a rancke, and the 53. ranckes in the midst would be onely of 17. men to a rancke and, wherein parting the roote into 3. there remaineth ouerplus onely one, it goeth cleane contrarye to this. For that the first and the third part of the said

said



said great rebw of ranckes, will alwaies be of as many men to a rancke as shall be the whole third part of the roote, and the middle part, which is the second, will be of one man more then the third part of the roote. And for as much, as there can neuer remaine ouerplus aboue one or two in deuiding the roote into thre, therefore this foresaid rule shall serue in what number of men so euer it be, as well Quadrate as not Quadrate, for that like as before is said in numbers not Quadrate, alwaies there is taken the roote which goeth nearest to such a number, and therewith to do accordingly, as aboue hath bene said. And as for the rest due of the men that cometh to be ouerplus of the Quadrate of such a roote, may be placed some other where as shall be thought most best. For example if there were foure thousand men, which number is not Quadrate, yet notwithstanding of the same number there ought to be taken out the nearest roote thereof, which is 63. so that there shall remaine ouerplus one and thirte men, whom minding in a subdaine to bring into a foure square battaile, there ought to be put in a rancke 63. men, and such a battaile shall come to be foure square, as in the beginning hath bene said: and where there remaines ouerplus those 31. men, the Sergeant may place them as he shal thinke good. Likewise minding to caule those 4000. men to march, there ought also to be taken the nearest roote therof, which as aforesaid, is 63. which deuiding into thre, comes vnto thre times 21. & nothing remaining ouerplus: & therefore the said men ought to be cauled to march. 21. in a rancke, & the said rancke to be deuided into thre parts. 63. to a rancke according to the foresaid rule, in such sort that the last part shall be 64. ranckes, and also 10. men more because of those 31. men that were ouerplus in the beginning, the which as hath bene said remained out of the afair: And after the same manner,

## The ordering of Souldiours

it is to be done when the roote of such a number that is not Quadrant, doth not agree with the perfect diuision by three, which is, if there be ouerplus one, to procede as aboue hath bene declared. I meane to put a man more in a rancke to the middell part, and to the other two partes, the first, and the third, to put onely so many men in a rancke, as the third part of the roote shall containe: and when there remaineth ouerplus two, to procede cleane contrarie: that is, to put a man more in a rancke to the first, and to the third part, and to the second, to put onely so many men in a rancke as the third part of the roote shall be of, and those men that are remaining ouerplus, in taking out the roote in the beginning to place them, as aboue I haue said.

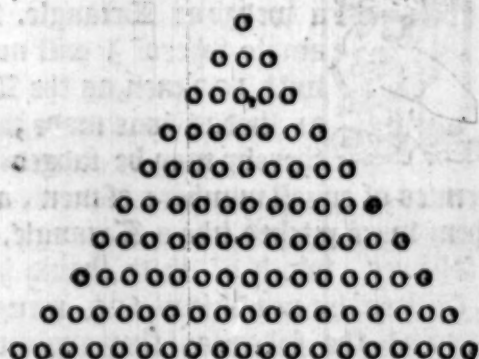
¶ How to ordaine a number of men or an armie into a battaille, like vnto a wedge, or three square, so that it may be apt to marche with with the point thereof toward the enemies. Cap. 3.



This fashion of battaille, is made after this maner, first placing one man, and after three, & next five, and after seven, and then nine after a leuen, and so to increasse alwaies two men more, till such time as there be no more men to place. Al be it there may be such a number of men, that at the last they can not, or there shall not bee sufficient to make vp the last rancke, which happening, those men may be left out of paraie, to serue wher their Captaine shall thinke most mete, so that the like happeneth often times, and in euerie maner of ordering men, that alwaies there resteth some man out of the aray. And so the better vnderstanding herof: admit so example that the men that is to be brought into a three square

square battaille be 100. I say that first one is to be placed, after 3. after 5. after 7. after 9. after 11. and so to procede: adding alwaies two men more in a rancke, untill they be all placed, as here following appeareth in figure. Where the last rancke in this case, shall come to be 19. men, not remaining any man ouerplus: and this is, for that the number of men, (which is 100) is a Quadrant number: and likewise in euerie other number that is Quadrant, the said Triangle battaille shall be made without any man remaining ouerplus.

Head.



But if the said number of men be not a Quadrant number alwaies there shall remaine ouerplus so many men, as the said number of men shall be more then the great quadrant number contained of the same, as for example, if the presupposed men to make the three square battail were 120. I say, that there shall remaine ouerplus 20. men out of the aray of the three square, that is, so many as the 120. exceedeth 100. (being the greater Quadzante number contained in the same) Which also shall be 20. but if the said men were 123. there should remaine ouerplus onely two men, for as much as the greatest Quadrant number

B.iii.

ber



## The ordering of Souldiers

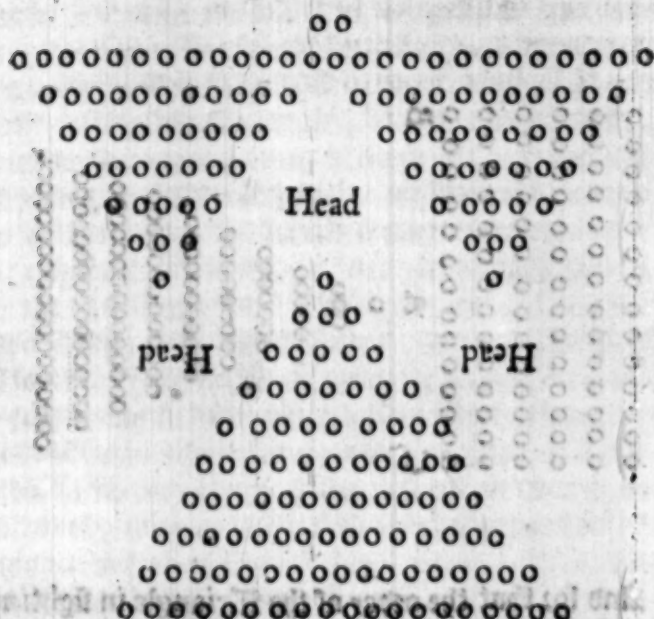
ver that can be taken of 123. shall be 121. and 123. is more then the said 121. by the said two, and the verie same is to be understode in every great number.

To make the battaile called the sheeres, which in old time they vsed to set against the Triangle.

Cap. 4.



He Sheeres are made with two Triangles ioyned together, for to receiue betwene them the said battaile, made like a wedge or Triangle. The example wherof I will make also with 100. men, as the Triangle or wedge was made, so that thereby may be iudged if there were two armies of equall numbers of men, and that the one of them were pitched like a Triangle, and the other like a Sheeres, which of them should haue the aduantage. Wherefore minding of 100. men to make the battaile called the Sheeres, they ought to be diuided into two equall partes, and of euerie one of these partes being 50. to make a Triangle according to the maner aboue declared, and to ioyne them together, as here following appeareth in figure with their points towardes the enemies: I meane towardes the wedge, to receiue it betwene them: And it is to be noted how in making of these two Triangles, there shall remaine ouerplus one man of euery one of them out of y<sup>e</sup> arait, for that the number of fiftie is no Quadrant number, and it is more then the Quadrant number contained of the same (which is 46. by a man onely) so that betwene them both there shall remaine ouerplus two men, as here appeareth in figure.



What advantage it is to order men in a Triangle  
battaile against the enemy that knoweth not  
how to make the battaile called the Sheeres  
to set against it, in especially where there is  
as many men of the one part as of the other.

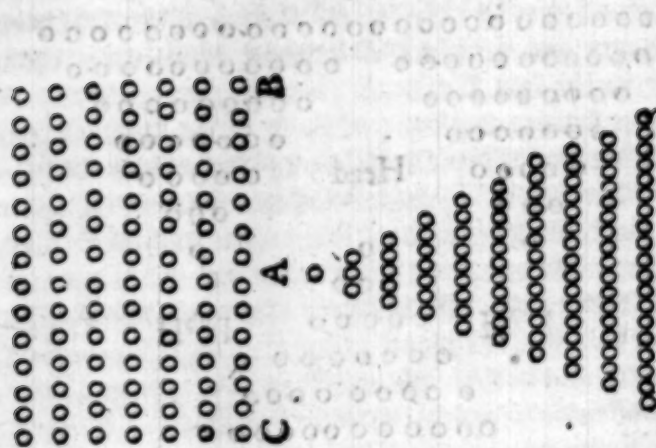
Cap. 5.



When the contrary part would come a-  
gainst a three square battaile, with a bat-  
taile that were foure square, as now a  
dayes is used, by all reason it shalbe bo-  
ken and ouerthrowne. As admit for ex-  
ample that ther be 100. in a three square  
battaile, & a hundred other men in a foure square bat-  
taile, pitched against the in square, as here following ap-  
peareth in figure.

And

## The ordering of Souldiers



And for that the order of the Triangle in fighting, is after such sorte, that all those which shote with any kind of weapon, as peeces of Ordnance, Harkebuses, Dartes, Bowes, or Crosebowes, ought all to direct their shotte, and to stricke onely in the same place, wher the point of the Triangle seeks to enter, I meane in the point A. whereby the menne that are in the same place, shall either bee slaine or else constrained to give place to the point of the saide Triangle through the great multitude of shotte striking in that place. So that the point of the saide Triangle entering therein, may continually penerate all the saide aray cleane through. For as much as all the Harkebutters, & Archers which remaine without, must not cease to shote in the very same place, and no other where else: which thing doing it is impossible but that way shall bee given for the saide Triangle to enter in, and once entered, such an armie is ouer throlwen without any remedie. For all the force and strength of such a Triangle being made



made in that place onely, it is not possible that men in such a place may be able to withstand, although there were many more in such Quadrant aray, then those that be in the said Triangle, because the place of . A cannot be succoured of any of those of the same battell, considering that if those which are placed towarde . B . or else towarde . C . would come to succour the place where the violence and force is made, it must needs be, that they must disorder themselves: and being once disordered, they runne into the very same mischiefe, after such sorte, that they shall remaine altogether broken: and remaining in their places, their strength or power, resteth of none effecte: for as much as none of them can be able to do any thing, how valiant so ever he be.

Whereby may be understood of what importance this Triangle battell is against the ennemie, that knoweth not the medecin or remedy thereof.

To bring a number of men or an armie, into a battell, which in olde time was called a Sawe.

Cap. 6.



This fashion of Battell according to the qualitie of the name, ought to be made as it were with teeth, like unto a Sawe which they vse to sawe timber withall. And therefore minding to bring a number of men, or an armie into such a fashion, there must be considered two thinges, the one, how many teeth, this Sawe is to be made of, and whether besides those teeth, there would be any other raies to sustaine such teeth or no. As for example, admitte that the men of whom must be made those onely teeth of this foresaid Sawe, be 100. now these 100. menne ought to be divided into the number of the teeth that this Sawe shall haue, and of euerie one of those parts,

an hundred men, to be divided into ten parts, each part being ten men, and so forth, as the nature of the battell requireth.

## The ordering of Souldiers

to fashion a Triangle, by the Rule declared in the third Chapter and those Triangles to ioyne close together, according as was done of those two that made the Spheres: As put case that of the saide hundred menne there would be made foure teeth of a Sawe, then the saide 100. men must be deuised in to foure partes, in which diuisions it will come to 15. for a parte: Now of euery one of these partes, ther ought to be fashioned a Triangle, according to the order giuen in the foresaid third Chapter. And these foure Triangles to ioyne them straight together, as here following appeareth in figure: and this is in as much as in making the teeth only: but if peraduenture there would be put an other order behind the said foure teeth, it is needfull first to, determine of how many men such araye is to be made, and those to take out by themselves, and of the rest to

make the teeth, and behind the said teeth to place those number of men which first were taken out, and to ordaine them so many men in a rancke, as shall be found directly in leight in all the hinder partes of the teeth that are made, as for example, aduente ther bee two hundred & xliiii. men, and that with a hundred men thereof, there must be made foure teeth of a Sawe, the other 144. to be made certaine ranckes to sustaine the saide foure teeth. Wherefore the hundred men being brought into foure teeth, as aboue is declared, comequently behind those 5. there ought to be placed those C. and xliiii. men xxi. men to a rancke: for as much as in all the foure lower partes of the said foure teeth there

there be 36. men, as in the figure next following appeareth. And after this manner and order, if there were a hundred thousand men, they might be set in a ray, placing them, as above is done with that little number.

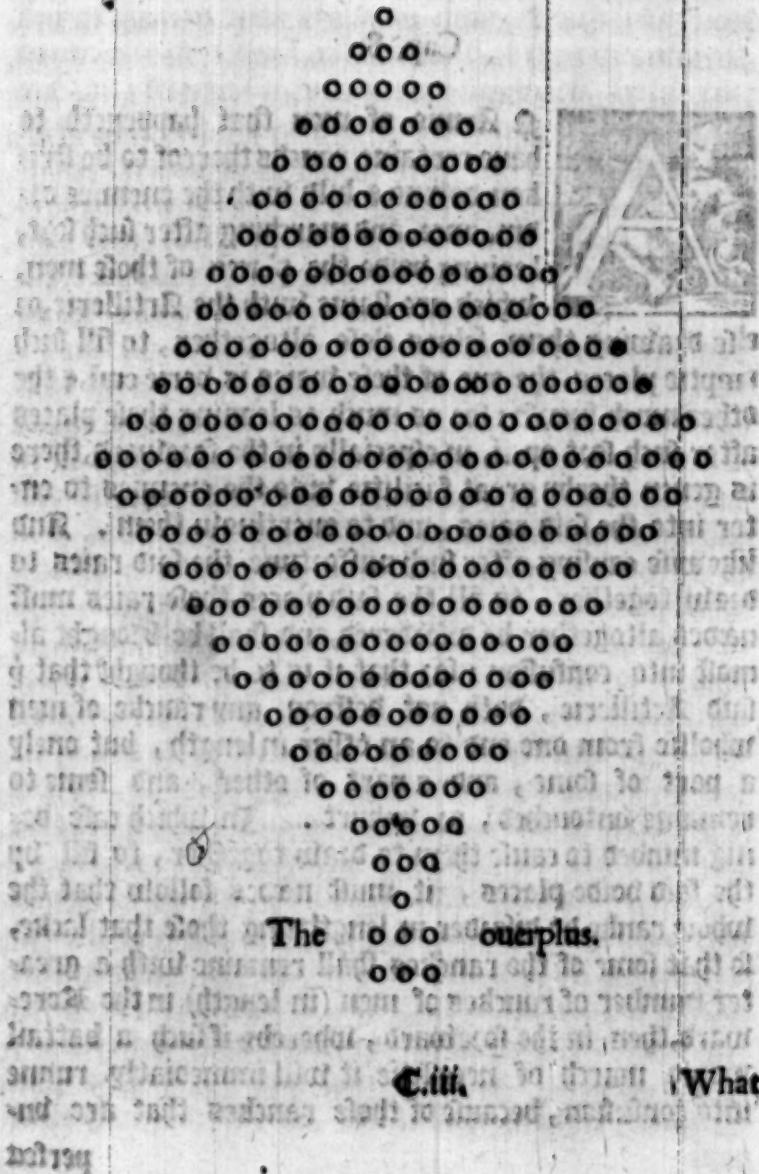


## The ordering of Souldiers

to remaine ouerplus any men, that are not sufficient to make vp an other rancke, yet the very same rancke ought to be finished vp with some of the other halfe number of men, so; that one of these two Triangles ioyned together, commeth to be of one rancke moze then the other. As so; example, admit the men wherewith this fashion battaille is to be made, be 320. which must be deuided into two equall partes, so that by such deuision there will be 160. men so; a part, and of the one of these partes, there would be made a Triangle, according to the order declared in the third Chapiter, which done, there shall be found to remaine ouerplus. 16. (by the reason alledged in the said third Chapiter) so that there shall lacke 9. men to finish the said last rancke of the first Triangle: Wherefore the said rancke must be made vp, with the men of the other halfe, as taking those 19. men which lackes, so that in the said first Triangle may be 169. men, and in the other part onely 151. men, wherewith the other triangle ought to be made vpon the last rancke of the first, which last rancke shall be of 25. men: wherefore vpon the same, there must be placed an other rancke of two men lesse, that is 23. and vpon the same said 23. men, to place another of 21. men, and vpon the 21. men, to place another of 19. men, and vpon those 19. men to place another of 17. men, and so to procede alwaies with two men lesse, till such time as it commeth to the rancke of one man onely, as here following appeareth in figure: True it is, that there shall be found in the end, to remaine ouerplus 7. men, the which the Sargeant may place where he shall thincke good. And thus with this maner of order, there may be brought into like aray, any armie how great so euer it be, and they may turne them selues, and in marching, make of the Rereward, the Foreward, and likewise of what so euer side they list.

Front

Front.



## The ordering of Souldiers.

¶ What is best to be done where the ordinance of the  
euemies being shott into the armie hath  
slaine many men.

### Cap. 8.



¶ An Armie of men that happeneth to  
haue certaine ranchs thereof to be stri-  
ken downe & kild with the enemies or-  
dinance, and marching after such sort,  
leaving voids the places of those men,  
which are slaine with the Artillerie, or  
else drawing them selues close altogether, to fill such  
emptie places, the one of these waies is verie euill, & the  
other much worse: for as much as leaving those places  
after such sort open, in especially in the foreward, there  
is geuen thereby great facilitie unto the enemies to en-  
ter into the said raies, and to ouerthrow them. And  
likewise causing after such misfortune the said raies to  
draw together, to fill the said places, those raies must  
needes altogether be disordered, and shall be brought al-  
most into confusion: so that it is to be thought that y<sup>e</sup>  
said Artillerie, doth not destroy any rancke of men  
whollie from one end to an other in length, but onely  
a part of some, and a part of other, and some to  
remaine vntouched, or unhurt. In which case be-  
ing minded to cause them to draw together, to fill vp  
the said void places, it must needes follow that the  
whole rancke do disorder in lengthning those that lacke,  
so that some of the ranches shall remaine with a grea-  
ter number of ranches of men (in length) in the Rere-  
ward, then in the foreward, whereby if such a battail  
would march of necessitie it will immediatly runne  
into confusion, because of those ranches that are im-  
perfect



perfect in length: Therefore that Captaine is to be praised, which instructeth his menne that in like chaunces, they neuer remaine without a companion before them, except it be in the front, as to aduertise euerie one of them, that if it fortune to happen any of them to lacke the same man, which was wont to march before them, or else no, that then incontinent, and with seleritie they do march forward, vntill they finde an other companion in the accustomed distaunce before them, and wher it fortuneth no man to be found, to aduertise them, how they should then procede till they come to the head or front, and in such place to stand still, or else to march according as the other rancks in the head or in the front shall doe.

And this being a generall rule that euerie man must take the measure of his marching softly or fast of his companions that goeth before him, and not of any that be of their sides. All those men therefore that shall be found in the verie same rancke behind such a man that doth lacke his companion or companions before him shall be constrained to runne, or goe a pace according as that man shall marche, which shall be next before him: which thing being obserued of euerie man in the battell, alwaies the forward or front thereof, shall come thereby to be whole and sound, and those empty places of the dead to be transformed into the Rerewarde, in which places there shall not almost be any perill. As for example, admitte, that in a battell of 144 menne in fashion foure square, the enemies hath slaine 12 menne, as by the void places in the figure following appeareth. I saye that hauing aduertised euerie man to doe as much as before I haue declared, which is, that euerie time that he lacketh his fellowe (or mo men) that marched before him, he doe straight way make hast, and with all speede possible not to cease going forward, till he finde another companion

# The ordering of Souldiers.

nion in the accustomed distannce that goeth before him

**Front.**



And if it fortune in such a rancke that in the ende hee  
finde no man, yet he ought to procede so much till hee  
come to the last rancke in the front, and there to stand  
still; or else to march according to the order of the  
saide rancke. And likewise every man ought to take  
heede that in his marching fast or softelye, hee doe  
rule him selfe by his compaignion that goeth before  
him, and not of any of those that be on his sides: which  
thing





## The ordering of Souldiers.



The as the Captaine with sound of the Trompette, or with voice shall cause the Souldiours to be aduertised and taught to know how to tourne that way, which is betwene the front and the right side, or the left, and likewise that way that is betwene the right, or left side, and the backe, and after that they shall be well informed therein, euen so I would also haue them to be well aduertised of the same, that was declared in the last chapter, which is to shew and teach euery man that alwaies when he shall be caused to turne towarde any of the foresaide sides, and shall not finde to haue his fellow in the accustomed distaunce before him, that then the same men with all speede do procede, or march so farre right forth, till he finde a companion before him in the accustomed distaunce: of which thing euerie Souldiour being well informed and instructed, with the twinkling of an eye, an Armie that is in fashion square, may be transformed into a triangle. As for example, minding to make the right corner the point of the saide triangle, with sound of Trumpet, or with voice, causing euerie man in the army to turne them selues with their faces that way, which is betwene the front and the right flank, and incontinent, so soone as they are turned, euerie man observing the foresaid order, that is, that all those, which shall perceiue not to haue his fellow before him in the accustomed distance, do procede straight forth untill he haue one, which done, the said square fashion, shall be found to be chaunged into a triangle fashion, and the point of the same triangle figure, shall come to be the right corner of the front of the first figure. Which thing is as easie to be done as is possible: for the triall whereof, let there be for example 25. men standing in fashion square, as here after appeareth in figure, and to  
cause

cause it to be better vnderstande, I haue thought good to make this figure with the 25. letters of the a.b.c. Now minding to chaunge this foure square figure, into a triangle figure, it is needful to cause them al to tourne

*Front.*

A	B	C	D	E
F	G	H	I	K
L	M	N	O	P
Q	R	S	T	V
X	Y	Z	&	'

with their faces that way, which is betwene the head and the same side where I haue thought good to make the point of the wedge or triangle: as for example, purposing to make the corner E. the point and head of the triangle, I shall cause that euerie man do tourne with his face that way, betwene the front and the right flank, towards the corner E. which thing done, the foresaid figure shall come to stand as here appeareth: in which figure may be seen many men, that hath no felow in the accustomed distance before him although they haue a felow straight before him, much more further

## The ordering of Souldiers.

front.

A B C D E F  
G H I J K L  
M N O P Q R  
S T U V W X Y Z

ther of them the ordinarie, which is double so much as the ordinarie, as appeareth by F. who hath right before him B. but the distance  $y$  is betwene the said F. and the said B. is double so much as the ordinarie distance, wherefore if F. shall observe the preceptes above declared, immediately so soon as he shall have turned his face that way, he should intontment goe, to come nearer to the said B. in the accustomed distance, which doing, he shall bring himselfe betwene A. and G. Albeit the said G. shall not remaine in his first place, but shall goe nearer unto C. to the accustomed distance, & in the place where G. was first L. must come. So that F. shall stand betwene A. and L. and likewise if all the other shall proceed forward, according to  $y$  said order, until every man find a fellow in the

the



the accustomed distaunce before him H. shall goe nearer  
vnto D. and M. that follow the said H. and Q. shall fol-  
low after y<sup>e</sup> said M. euery one of them, vntill they come  
to their accustomed distaunce. And in like maner I. shall  
goe nere vnto E. and N. that follow I. and R. shall follow.  
N. and X shall follow the said R. euery one of them un-  
till they come to their accustomed distaunce. Likewise O.  
shall goe nearer to K. and S. shall follow. O. and Y. shall  
follow S. also to the ordinarie distaunce: and likewise &.  
shall also goe nearer to V. to the accustomed distaunce,  
which thing being obserued, such a foure square battell  
shall be transformed into a triangle battail, as here fol-  
lowing appeareth in figure, the point wherof shall come  
to be y<sup>e</sup> corner E. and with this order a Captaine may  
chaunge an armie, with turning of a hand, though it  
were of 100000. men from the fashion of a foure square  
to the fashion of thre square. So that the said men



be aduertised and taught, as afoze hath bene declared,  
D.iii. both

## The ordering of souldiers.

both as well to know how they ought to tourne, as to march. Which is of wonderfull importaunce; for as much, as at a sodaine to reduce an armie after this sort into a triangle fashion, it is almost impossible that the enemies shall be able, or shall know how to make their armie like the spheres to set against it, whereby shall come great aduantage as by the 5. Chapter aboue is plainly proued: for that it seems unto me, that a triangle battaile, may be alway sufficient able to breake al maner of soure square battailes as is vled now a daies, although it had halfe so many moe men, so long as those of the triangle battaile be well instructed of the maner of their fighting declared in the 6. Chapter.



of some thing more to be said, as hath been declared, hold

OF the perfect forme or fashion of strong places.



The forme which vnto the circular fashion doth most resemble, of expert and skilful souldiours, is aboue all other with most reason praised, so that the Curtine or walles thereof, bee made straight, and of such length, that of the bulwarkes they may bee flanked: which fashion being

made with many corners, is very meete and necessarie if in a sufficient great place it be erected: for where in small townes the iust length of the courtin is shortened, it is conuenient to build them with few corners, because if otherwise they should be shortened with a number of corners, the shortes of necessity the spaces betwene those must be, so that besides that the one bulwark may hurt the other, they shalbe moreour to no purpose, but rather an occasion of infinite cost, their courtins needing as is requisite to be defended of platformes, and the corners thereof shall come to be lesse blunt, and much sharper then they ought to be, by reason of the litle distance betwene them and the platformes.

Wherefore the more that they be made distant from those bulwarkes (the due length of the courtin being kept) so much the blunter the corners will come to be, which by them must be defended, and the more of those corners that there are in the same fashion, so much the blunter they shall also come to be: So that where the fashion of the places that are built be sufficient great to containe all the foresayd particulars, which for a sure fortresse is requisite to be made, all thing commodiously will come to passe: and the greater that



they shalbe, the more men they may haue to defend them  
and more commodious space within, for to retire with  
great and strong fortification, and the platfoymes may  
be made much further in, and haue the corners of their  
bulwarkes blunt, and with a large backe, meete for de-  
fence, and in assault, much surer then the sharpe, be-  
cause the sharpe pointed bulwarke, being battered de-  
fendeth the enemye from the platfoymes, so that vnder  
the same, being covered, he may almost out of daun-  
ger, make an assault. Where against a Towne or For-  
tresse, that were built after the fashion of these plattes  
folowing, in what so euer part of such places, the ene-  
mye should approach, marching towardes them to in-  
camps, or in battell rate to assault them, or with Tren-  
ches, and artillerie to batter them, either high or lowe,  
or by the curtain within, or otherwise, he shall alwaies,  
from many of those flankers of the same place, be  
greatly hurt and repulged, and of the platfoymes in  
espetsially, more then from any other where, because  
they be most nere, and stand higher then all the other,  
and they shall also hurt him more, when he shall be  
somewhat farre off, then nere hand, as may be seene by  
the plaine platte that hath the number 1, and in the  
same that is raised up, that hath the number 2.

The which with two other are also here after picture-  
red, to the ende that thereby may be considered of such  
as shall see them, the sundry good and notable effectes  
that bee in them, the which although it be not pos-  
sible so easely with writing to be exprested, yet by  
their helpe they may be better understood and com-  
prehended, and moreover by them shalbe gotten this  
knowledge, whereby euery man commodiously may  
vnderstand, where the enemye going about with  
his power, may best deuise to assaile them, and how  
they within may provide to defend and withstand the  
same with their men, taking them from those places  
where

where they may be best spared, so that building & fashion of fortresses, in the said maner, there shall in no place happen any such incomodities, as in other that are ignorantly made, after the ordinary fashion with lesse corners, as also by these figures, here following is more plainly declared.

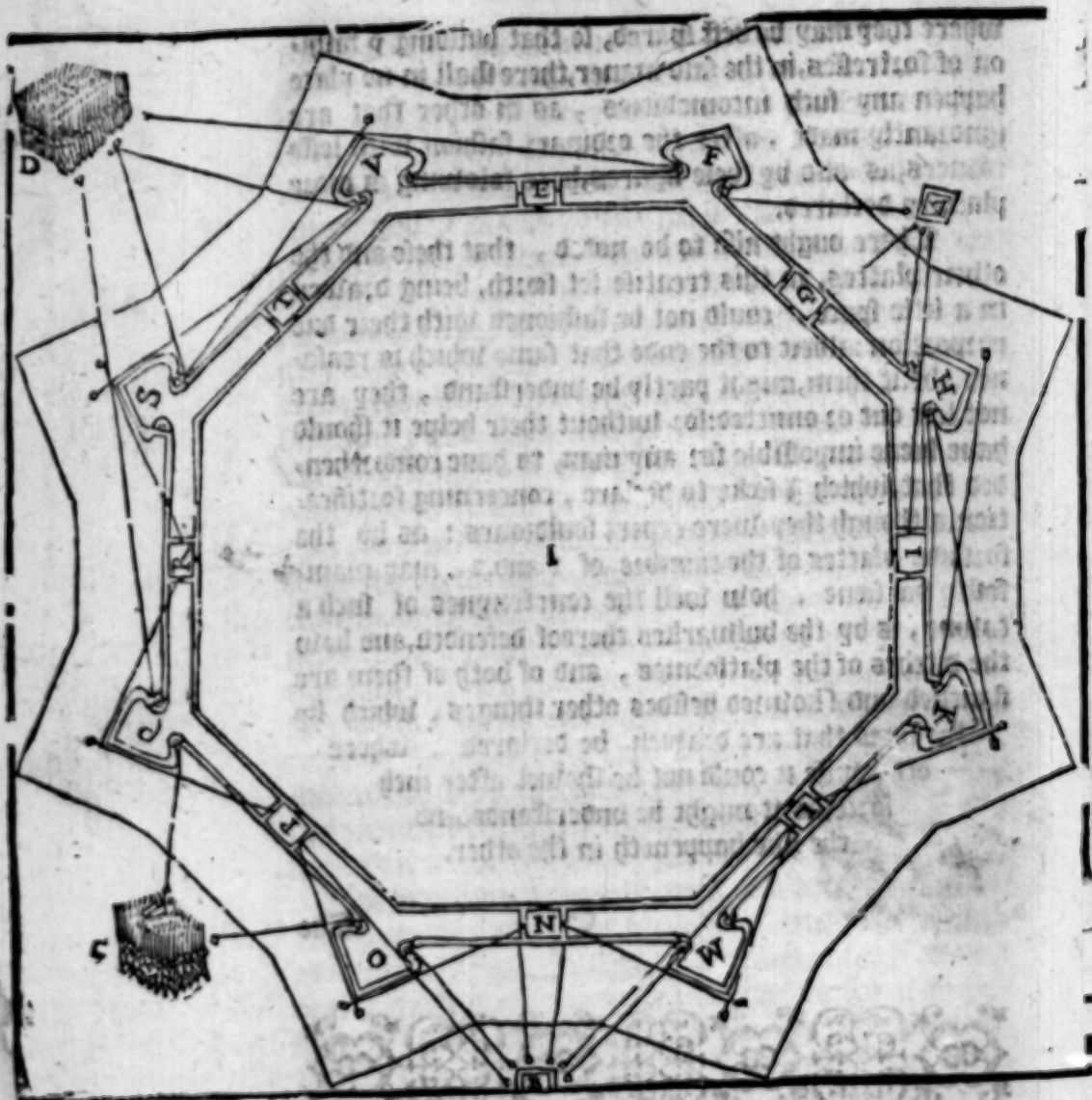
There ought also to be noted, that these and the other plattes, in this treatise set forth, being drawen in a little space, could not be fashioned with their due proportion: albeit to the ende that same which is reasoned about them, might partly be vnderstand, they are not left out or omitted: for without their helpe it should haue bene impossible for any man, to haue comprehended that, which I seeke to declare, concerning fortification, although they were expert souldiours: as by the foresaide plattes of the numbze of 1 and 2. may manifestly be seene, how well the courtenynes of such a towne, is by the bulwarkes thereof defended, and how the ditches of the platformes, and of both of them are flanked and skowred besides other thinges, which by the lines that are drawen be declared, where otherwise it could not be shewed after such sorte, as it might be vnderstande, and the like happeneth in the other.

C.

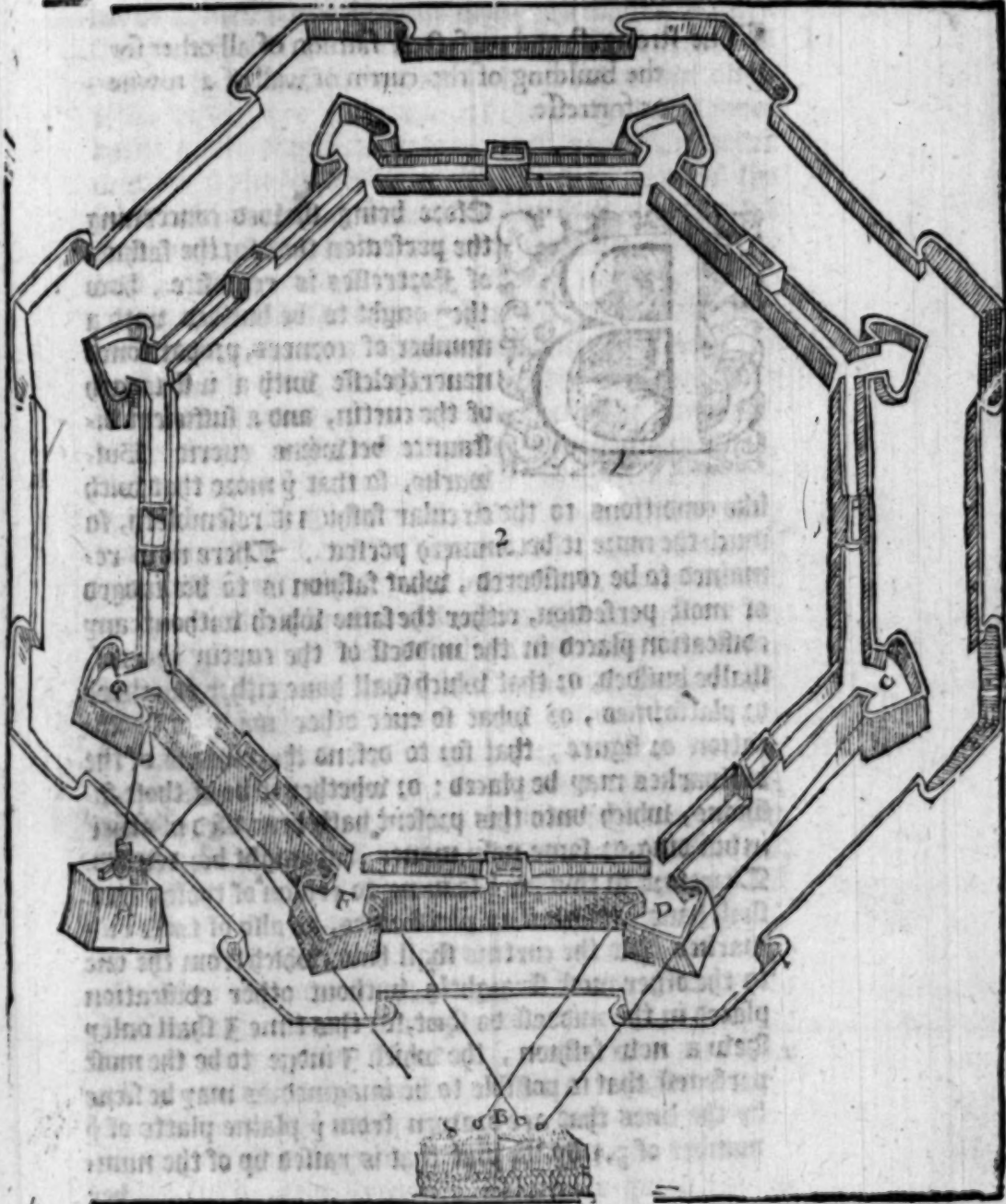
The



# Platte







The strongest and perfectest fashion of all other for the building of the curtin or wall of a towne or fortresse.

**B**efore being shewed concerning the perfection that for the fashion of Fortresses is requisite, how they ought to be builded with a number of corners, proportioned neuertheless with a iust length of the curtin, and a sufficient distance betwene euerie Bulwarke, so that y more that with like conditions to the circular fashion it resembleth, so much the more it becommeth perfect. Where now remained to be considered, what fashion is to bee iudged of most perfection, either the same which without any edification placed in the midst of the curtin thereof, shalbe builded, or that which shall haue either cavaliers or platformes, or what so euer other maner of edification or figure, that for to defend the curtins of the bulwarkes may be placed: or whether it be of those fashions, which vnto this present hath bene vsed of other in building, or some new maner that might bee deuised. Therefore in this part leauing to reason of those, that shall haue cavaliers or platformes, as also of those bulwarkes that the curtins shall haue, which from the one to the other most straightly without other edification placed in the midst do shew, for this time I shall onley shew a new fashion, the which I iudge to be the most perfectest, that is possible to be imagined, as may be scene by the lines that are drawen from y plaine platte of y number of 3. & by the plat that is raised vp of the number

ber of 4. here vnder figured, which resembling so neere the circular figure, as the due length of the curtin will suffer, they shall haue this difference from the other which directly are distended, that the curtin being made backe a conuenient distaunce, that space may be left meete to make from the one and the other point of the same retire, a flanker, as two like flankers may bee seene, in the plaine plat of the number of 3. by the letters E. and F. and in the plat that is raised vp of the number of 4. by the letters A. and C. they shall haue commoditie to direct their ordinaunce to flanke, as well high as low, like vnto those that are commonly built now a daies: whereby not onely the same space of the curtin, that is betwene the one and the other of them shall be perfectly defended, as may bee perceiued by y<sup>e</sup> plat of the number of three, by the line drawen from the letter E. to the letter F. But also that which lieth betwene them and the bulwarkes, as in the said platte, by the lines that describeth the manner of the shotte the one from the letter E. to the letter S. the other from the letter F. to the letter R. may be vnderstode, and likewise the curteines of those bulwarkes, as also in the verie same, by y<sup>e</sup> line that is drawen from the letter E. to the letter Q. is shewed, with a better maner than in other fashion of building that is vsed can be defended, so that all the partes of them shall not onely be made to bee able to shote by flanke, but also thereby to shote by right line, as in the platte of the number of foure, by the line that passeth from the letter C. to the letter D. and from the letter A. to the letter B. may bee perceiued. And whereas they may be builded with lesse cost then otherwise, they haue also commoditie to make their gates equally distant the one from the other, from the next Bulwarkes: where they are placed most safely and commodiously with great strength, and those gates bee as well,

C.iii.



well, as all the rest of the wall, and greatlier in that part, much surer from the assailing of the enemies, then in what so euer other maner of fashion might be deuised: for as much as the platfoymes and caualiers be nothing so strong, but more easie to be ouerthrowen, in respect to this maner of building, which is most sure from such daunger, and exceedingly well defended from the force of the enemy: to the which, the nerer that the enemy shall approach, so much the more he shall of those within be hurt, contrarie to that, which in the platfoymes happeneth. Moreover there may be certaine slaughter houses built in the ditch, as in the plat of the number of 4. by the letters F. H. is shewed, which the enemies with great difficultie must first seeke to win, before they can come nere the walles. And those being wonne, shall be but small preiudice to the towne or fortresse: wherefore without comparison, this fashion is greatlier to be praised then the same with platfoymes, for that the nerer the wall, the enemy shall come, so much more from the bulwarks by flank, and all most on the backe, and from other places, both by flank, and by front in one instant, he shall be hurt and broken.

Where also in such a kinde of fashion with many corners, the greatnes and roome of the towne within, is somewhat deminished, in respect to those that are made with platfoymes. Therefore I conclud:, for the consi-

derations aforesaid, these to be the most per-

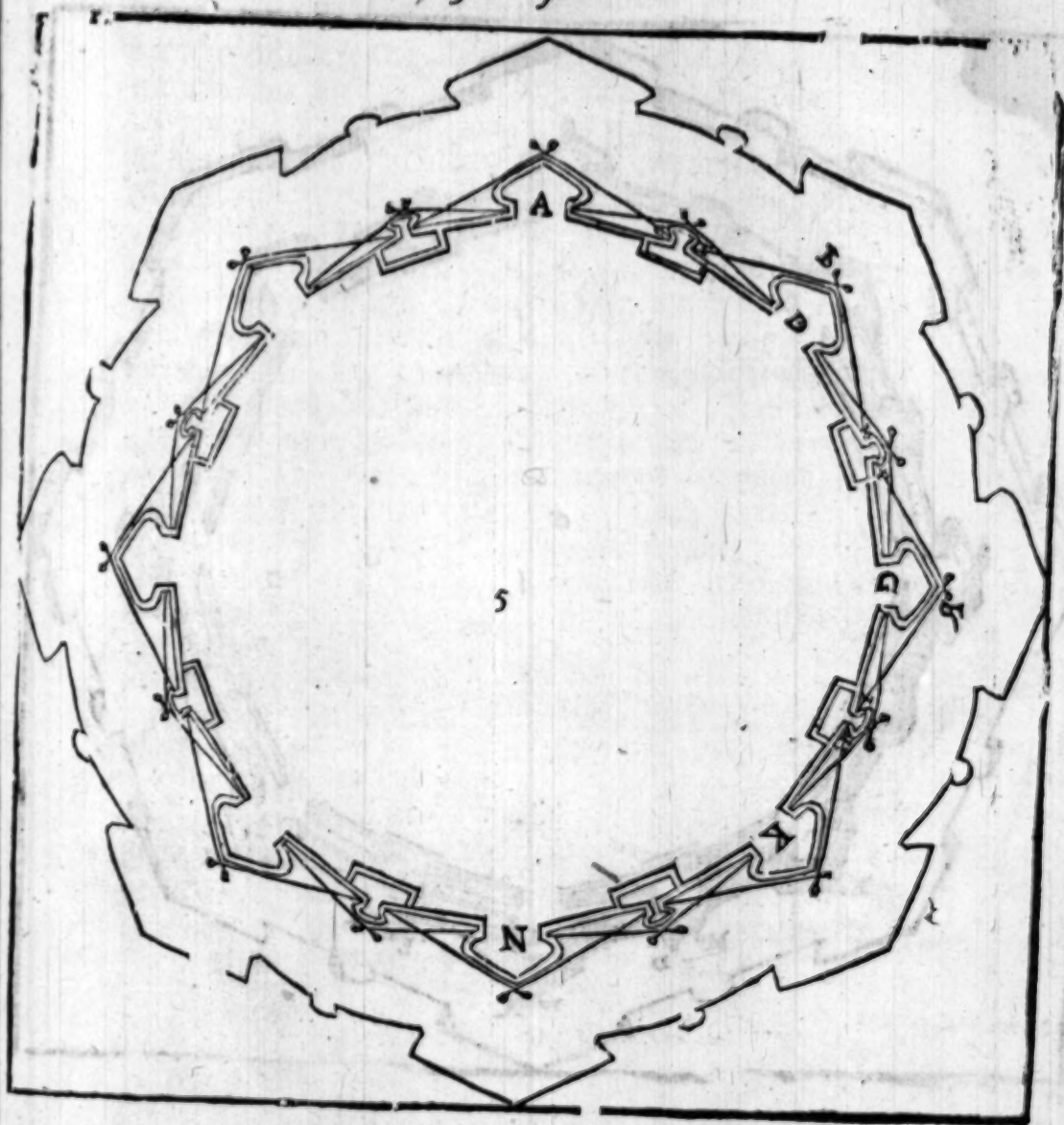
fectest fashions that any strong

fortresse, is possible to

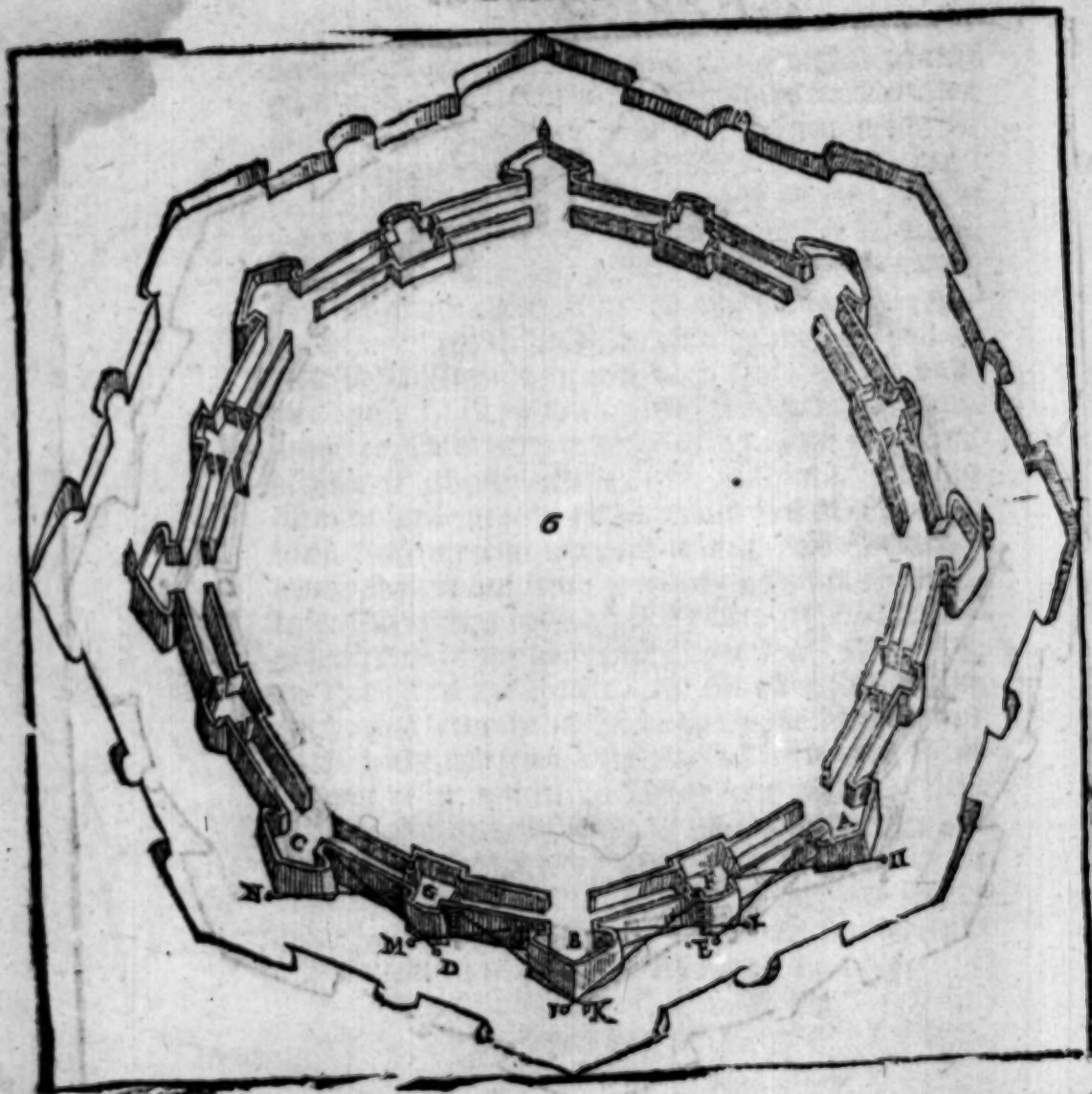
be made.

An

*of fortification*

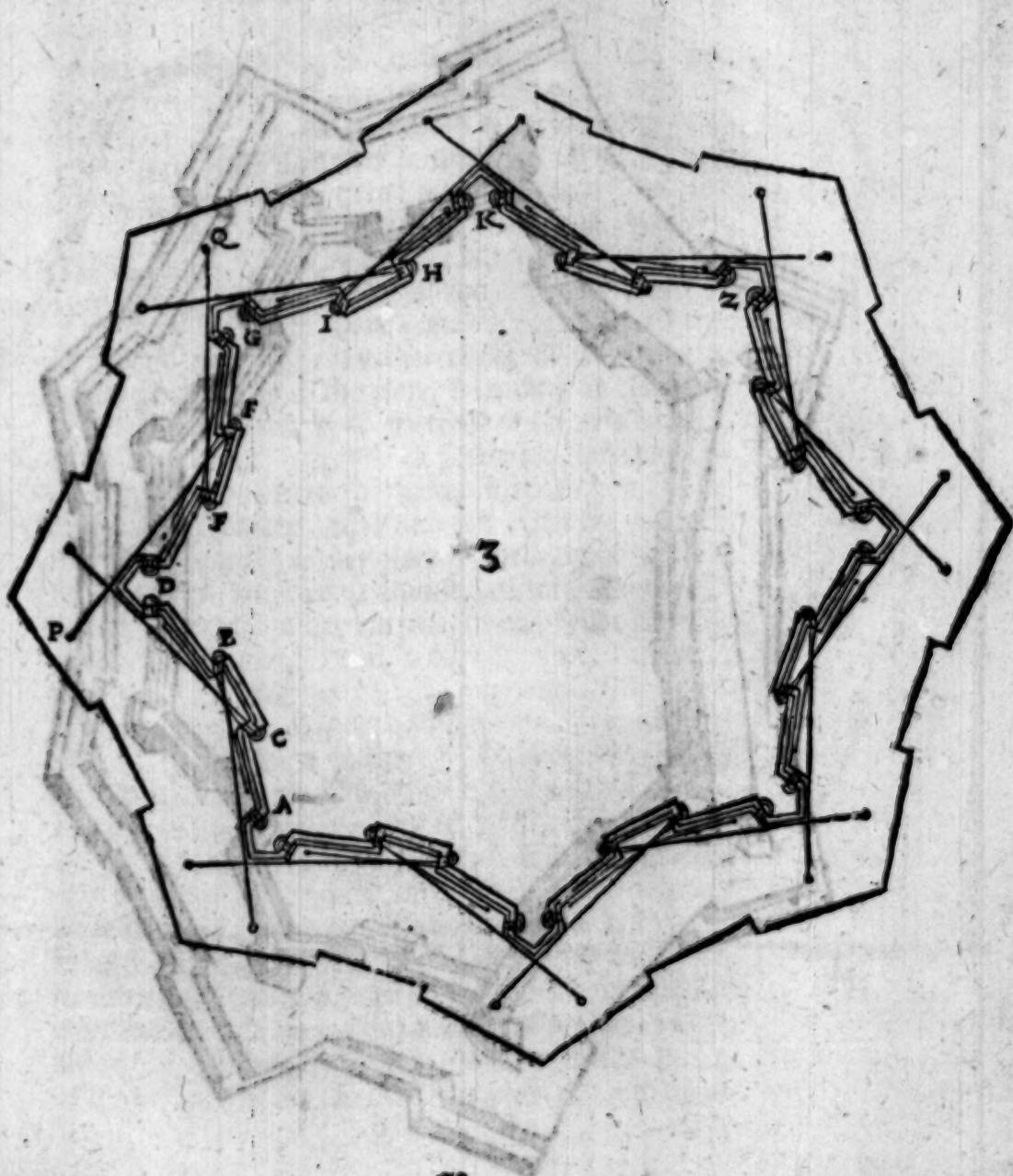


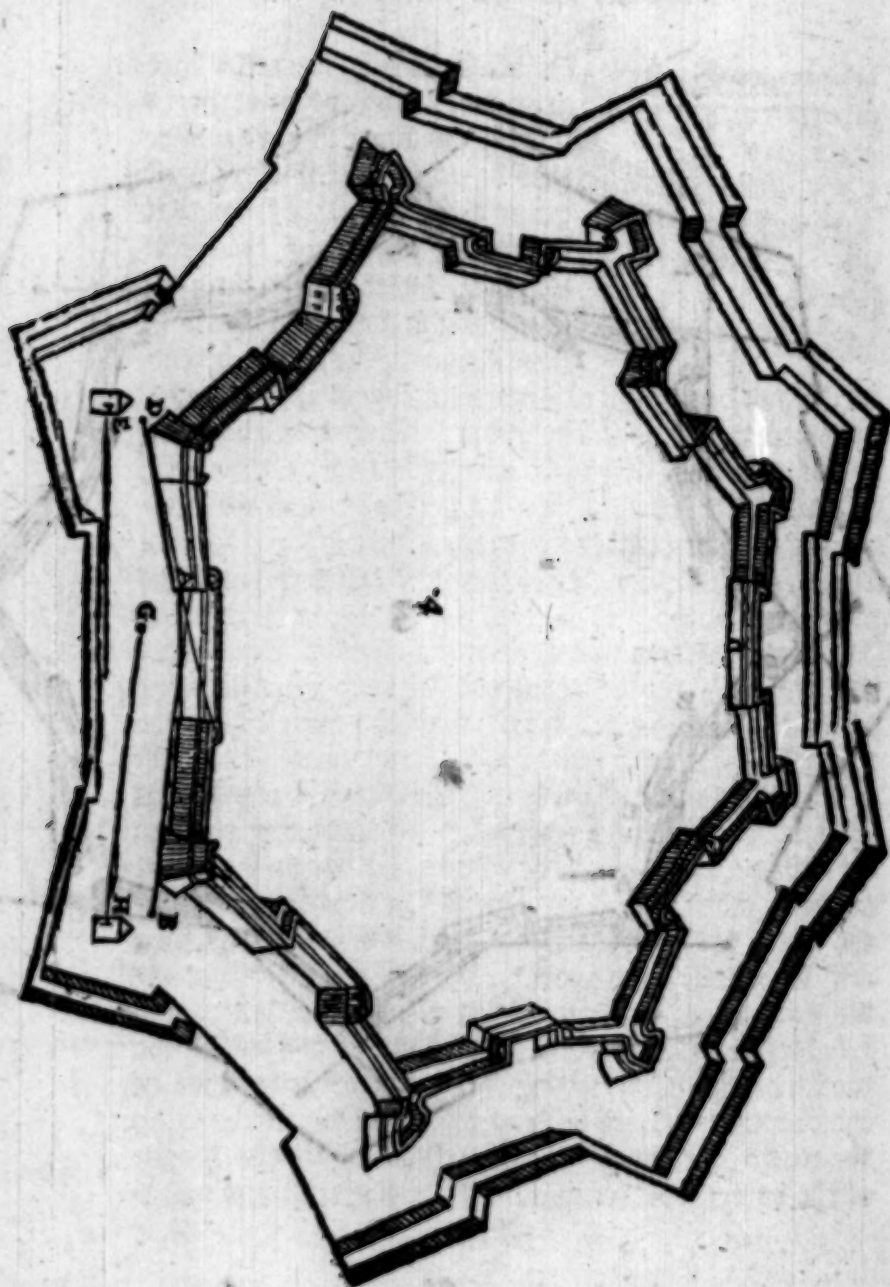
Plattes





*of Fortification.*





¶ An example of the quadrant forme to prooue that it causeth debilitie and weakenesse.



**T**he Towres and fortresses that are builded after a four cornered fashion, in what so euer maner they be made, are subiect to most great inconueniences: for that the sharpe corners of their bulwarkes, which of necessitie the same fashion will cause them to haue, may verie easily be battered, and vnder the ruine thereof, the assaults of y<sup>e</sup> enemies defended, as in the platte following. of the number of 7. by y<sup>e</sup> bulwarke C. battered of the artillerie D. is seene. Whereby also may be perceiued how the ordinaunce may be planted to make a breach, and to take away their flankers, after such sort, that the enemies may safely approach to any place, either marching in battel ray to incampe, or assault, or with Pianers to worke, or for any other purpose, as by y<sup>e</sup> foure flankers of the three bulwarkes. L.E.C. may be vnderstand, the which of the artillerie. H.F.K.G. not onely are battered, but also two of them that haue the letters, L.C. as is seene, may of the artillerie. K. G. be beaten through their flankers, & the backe of their bulwarke. E. nearest to them which is on both sides of the flankes battered, the which for hauing in such place lesse thicknesse then any where else, and great height, may be the more easilier runnated, as is to be seene in the said bulwarke. E. battered with the artillerie F. and H. and also by the breach of the batterie, which in the cortin is made of the ordinaunce B. as is seene where the artillerie G. by the cortin both beate through the same in the breach of the batterie A. as manifestly appeareth: and more

ff. ii.

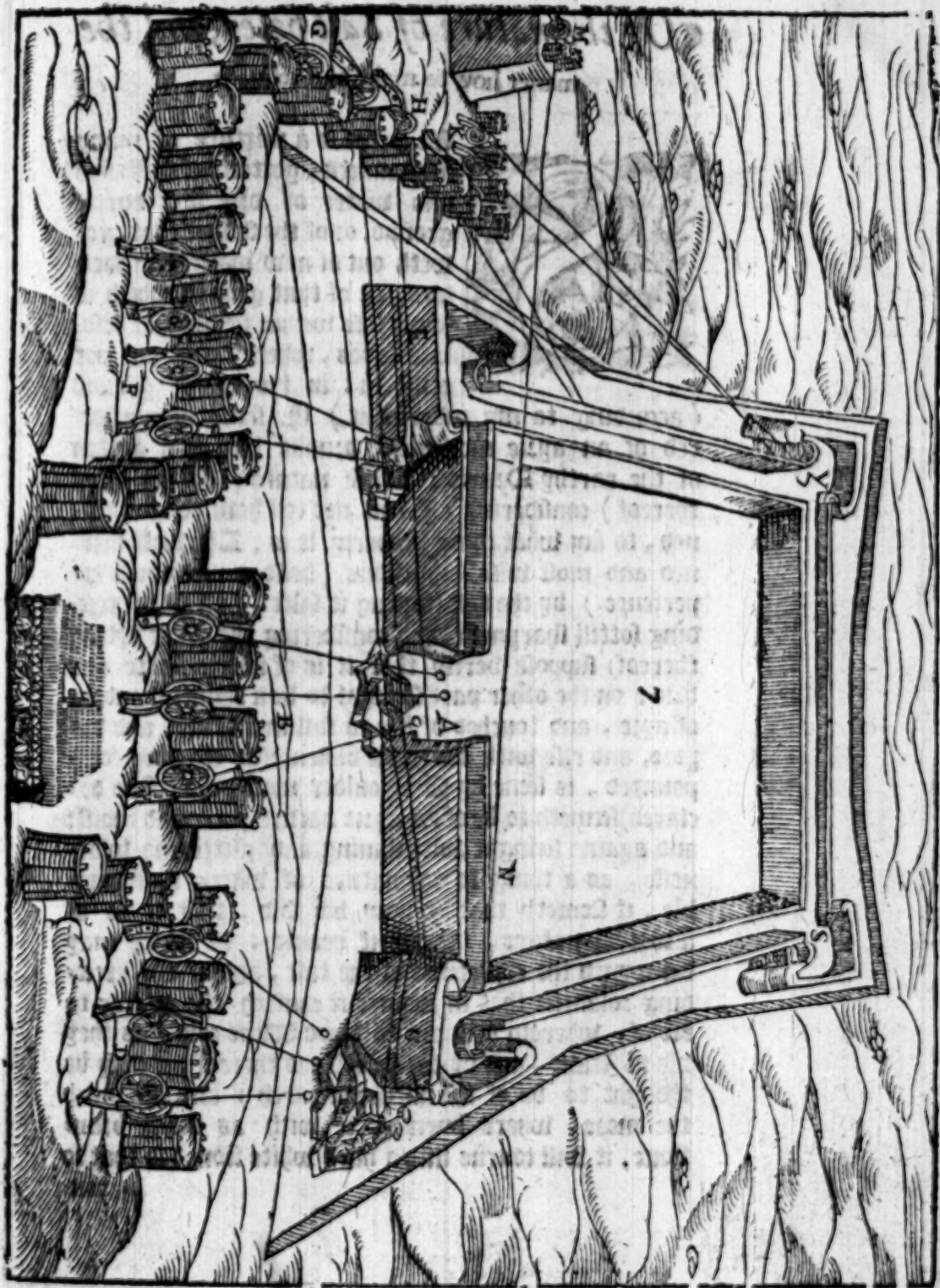
ouer



## Plattes.

ouer when they within would do any thing, they shal  
be beaten with the artillerie ouer the wall within the  
coztin N. from the caualier M. without, so that no man  
shall be able to stand behinde the same to defend. And  
not onely in this sort, but in sundrie wise, and in di-  
uers maners, what soeuer towne or fortresse is buil-  
ded after such fashion, may easily be battered and some  
made sautable, whereby without further decla-  
ration it is plainly to be vnderstode,  
how much the foresaid plattes.  
of the other fashion ex-  
cell this.





*Of the nature of Salt peter, and the  
maner how to make and refine it.*



Salt peter is a mixture of many  
substaunces, gotten out with fire  
and water of drie and durtie  
ground, or of the flower that groweth  
out of new walles, in sel-  
lars, or of that ground which is  
found lose within tombes, or deso-  
late caues, where raine can not  
come in: in the which ground  
(according to my iudgement) the same is ingende-  
red of an ayrie moistnesse drunke vp, and gotten  
of the earthy Driues: whose nature (by the effect  
thereof) considering, I can not tell how to be resol-  
ued, to say what thing properly it is. The well lear-  
ned and most wise Whisitions (besides medicinall ex-  
perience) by the tast (finding it salte, and with excee-  
ding softill sharpnesse, and considering the great byting  
thereof) suppose verily that it is of nature hotte and  
drie: on the other part seeing it to be a thing ingendred  
of ayre, and touched of fire to fall in a flame, and va-  
pore, and rise with a terrible violence (as the same com-  
pounded, is scene by Gunpowder most manifestlie de-  
clared) seemeth to be of an ayrie nature, hotte and moist:  
and againe seeing it with shining and glittering whit-  
nesse, as a thing to the nature of water conforma-  
ble, it seemeth that it may be said, that it is of  
a watery nature, finding it heauie: to which may  
be ioyned the experience of the tast, and of the excee-  
ding coldnesse that in Sommer it causeth the water to  
be of, wherein it is put to keepe Wine cold, as they  
use in Italie, and by the brittleenes thereof, it may be  
thought to be of the nature of earth: and so much  
the more, where burning it with as much brim-  
stone, it will tourne into a hard white stone: so that to  
con-



conclude, it seemeth that it hath the soueraintie and qualitie of euerie Clemente. Now of this auncient writers, was called Nitro: and Plinie in his naturall historie in the .xxxi. booke sayeth, that it differeth not much from salte: whose nature seemes also that vnto Whistions hath not bene hid: and it is found in many places, but the best is found in Macedonia: Albeit the late writers specially they of our partes, say that Plinie, and the other writers beleued that it was minerable: and peradventure they are deceiued: for that there is of the artificial: which hath the very same vertue, and as some thinke, moze stronger of nature: and is found for the better same medicinall effect, better then the naturall. Now this (as I haue sayd) is drawen forth from the said durtye earth, so that the earth dries by rainie hath not ben extinct: but the most excellentestie of all other, is made of the dunge of beasts, conuerted into earth, in stabelles or in dunghilles, of long time not vsed: and aboue all other, of the same that commeth of hogges, the most and best is gotten: whatsoeuer dung it be of, it is requisite that by continuance of time it be wel resolued into earth, and the humiditie thereof dryed: yea and it is needefull that the same earth be as it were dustie. To munde to haue a way to know whether it be good, by the tast of the tongue it may be felt if it be biting, and how much: and finding it strong, so that you determine to worke of it (making a great quantitie) it is necessarie to pround many Cauldrons, fornells, barrilles or tubbes: and likewise wood, white lime, and ashes of olde oke: but chieffest must be provided a great barne, or other walled house nere to the water (whereof it is needefull to haue inough, as also of earth, both commodious for the place, and likewise euerie other thing.)

But first the fornells must be made for the cauldrons, and they must be placed thereon, as those be that

## The making and refining

that the diers vse: then there must be prepared ioystes as long as the house, and so broade, that commodiūs lie aboue ground may stande buttres with their heades knocked out, square chestes, barrells or tubbes to the number of .50. or .60. or .100, (according to the cauldernes, and the capacitie of the place) and betwene euerie two of those vessels, there must be set a halfe tubbe to receiue the watter that shall run out: or there would be placed a channell of wood that may go along vnder the holes of the vessels that are set aboue ground, so that it may conuaye all the water that commeth from them, into a great tubbe or two, sufficient to hold all the water full of substance of Salte peter: and the buttres that haue their headdes knocked out, or barrells or tubbes, in the bottom of euerie of them there must be made a hole on the one sayd, with an Awgar, or else three or fouer littell holes made with a good big perfer: & vpon them must be layde a littell thin linnen cloth or else y<sup>e</sup> end of a brome, or some straw, to y<sup>e</sup> intent that it may keepe the earth vp, and straine the water that shalbe put amongst the same earth which is to be wrought, when it is tasted with the mouth, so that it bee certaine that it containeth, Salte peter.

Then there must be made thereof, in the midst of the house where it is to be wrought, a great hill, next vnto which must be made an other halfe so bigge, which must be made with two parts of vnslaked lime, and thre of oke ashes, or other ashes, which in tast are verie strong and sharpe: and then the one hill must bee well mingled with the other, and with the same composition, the tubbes must be filled that are set a loft vpon the ioystes, within a span of the mouth, or else (minding not to mingell with the earth the ashes and the lime together) you may put first a spanne thicke-  
nes

nes of earth in the bottome of the tubbe, and then three fingers thickenesse of the so: sayde lime and althes: and vpon the same after, an other spanne thickenesse of earth, and on that likewise, an other three or foure fingers thickenesse of lime and althes: and so putting one rewe of one thing, and an other of an other, you shall fill all the buttes and tubbes, or other vessels that you haue placed, euen as aboue I haue said, within a spanne of the mouthes of them, and the rest that is then emptie, which you left, you must fill with water: the which running through all the earth, by a litle, & a litle you must let it droppe in the tubbes & stand vnder to receiue it, or in the gutter or channell, or where you list, so that it be conuaied into one or into sundrie tubbes, or where you thincke good: and so you must see well that you gather all the water that you powred vpon the earth, after it is passed through the holes of the bottom of the tubbes, in such wise, that it bring with it all the substance and vertue of the Saltepeter that was in the said earth: whereof by putting some of it on your tongue, you may tast: and finding it biting and very salte, it is a token that it is good and that you haue done well: if not, powre it againe vpon the very same earth, or vpon some other new: but finding the first earth full of substance as much as sufficeth, you may againe powre vpon it more water, to wash better the remnaunt of the earth: albeit this second water would be saued in an other vessel, and after this, the earth may likewise be washed the third time, to the intent that all the substance thereof, may perfectly be gotten: but this second nor the third, ought not to be mingled with the first, if it happen not to come of the verie same tast: the which I beleue that it will not: but it must be put by it selfe in other vessels, so that it is good to powre vpon the chaunge of the next earth, and so you may pro-



## *The making' and refining*

reede, gathering a good quantitie of such water, taking heede neuerthelesse, that it be full of the substance of Saltpeter: the which if it seme vnto you, not of the same perfection, as you would haue it, you may polure it againe vpon the very same earth, or vpon other newe, till such time as it satisfie you, and that you knowe, that it bee full of the substance of Saltpeter.

Besides this, there must be made a furnes with one or ii. cauldrons of brasse walled thereon, which must bee as great as those that the Diers vse, & these cauldrons must then be filled, with the foresaide Saltpeter water: the which (as alreddie I haue tolde) ought to bee as full of substance as may be, so that it haue about the ii. third partes, and make it faire and softly to boile so much till it come to one third part, or there aboutes: and after take it of, and put it to settell in a great vessel, couered, which must be well bound about, with hopes of yron, and sure and close in the ioyning thereof, so the intent it spill not: and thus when the same water is settled and well clarified, and from the earth and grosse matter, which in it remained, diligentlie purged, it must be taken out and boyled againe of newe in the same cauldron, or in some other: and so as much as euerye time that it boileth, if it bee not taken heede of, it turneth into skum, and sometimes swelleth so much, that often times running ouer it spilleth, and carrieth alwaye therewith much of the good: the which minding to remedie, you must take three partes of Oke ashes, and one of lime, and more ouer, in euerye hundred pound waight of water, there must bee dissolved foure pound of roch Alum: and when the cauldron boileth, take of the saide water with a pot, and polure into it ones or twice, and specially when you see the Saltpeter water rise in skum, which in a little while you shall see it alaine, both cleere  
and

and faire, and of an azur colour : and it must be boyled so long, till all the thinne watrinesse be vaporized away, and the substance of the salt peter thickened : so that it being taken out, and put in chesses or tubbes and cooled, may congeale, the which is best done, when the water is brought to least quantitie, taking it out, and putting it into a lesse caudron, wherein it will sener congeale: the which water being tasted, and scene to bee brought to such passe, to be readie to congeale, you may take it out, and put it in vessells of wood, or of earth that are rough within, with certaine stiches of wood, to congeale, and so you shall let it cole, and rest 3. or 4. daies, so as it may droppe, and be strained thzough some litle hole in the bottom of the vessell, and all the water y is not then congealed, you must take out and saue for to seeth againe, and the salt peter that is in any quantitie congealed, you shall finde to be according to the vertue that was in the water, or in the earth : but the cleerenes and fairnes thereof will come of the maister vertue of the water, that is put into it in the boiling which hath strength to purge it & make it come, as it were refined in y first seething: now this being taken from the sides of the vessel, where it congealed, and in the water therof washed, you must lay it vpon a table to drie thzoughly : and the same seeming vnto you to haue neede, or neuerthelesse minding to haue it aboue the common vse, for some purpose, more purified, and without earthy grossnesse, & altogether without fatnesse and saltnes, which for to make exceeding fine powder, or aqua fortis, is most requisite so to be: to be short, for what soeuer cause it ought to be refined, I counsaile you to do it after one of these 2 waies, which here following I shall teach you. The first which I like best, is with water, and the second is with fire, with water it is refined in this maner, taking of the foresaid mixture made of lime, ashes, and allome dissolved, and

## *The making and refining*

then for euerie barrell of water that you haue put in the cauldren, for to dissolue the Saltpeter, you must put into it fire potfulls of the foresaid strong water: and in the same quantitie of water so prepared, put so much Saltpeter as you thinke may well bee dissolued: and with boiling make it to resolue verie well, and seeing in boiling to haue cast vp scumme, you shall then take it out of the cauldron, and put it into a tubbe, in the bottome whereof, you must first haue put foure fingers thicke of fine sand cleane washed, and that must be couered with a linnen cloth: and by a litle hole made in the bottom of the tubbe, you shall suffer it to droppe by litle and litle into some other vessel set vnder to receiue it: & so this water thus strained, you must after put in the verie same or in an other cauldron to boile againe, and to make the greater part of the same water, that you put into it seeth away: finally make it boile so much, vntill you see it readie to thicken, pouring now and then, in making it, a litle of the foresaid strong water, and speciallie when it swelleth and casteth vp scumme: and this thing (being so handled) you must take out of the cauldron, and put it in Chestes or other vesselles of Wood, to congeale: which being a great quantitie, in three or foure daies, you shall finde all that congealed, which will congeale: which being taken out, you must order as you vsed afore the other: and the same water that is not congealed, must be boiled againe, and so you shall doe from time to time as it gathereth together and congealeth: and after this sort you shall make the Salt peter most white and faire, and much better then at the first seething.

Also Salt peter is refined in an other maner, which is with fire, but in a litle quantitie minding to do it well: and although it be a readie way, yet few vse it: albeit it serueth to get out the safenes of salt peter



ter, for that it sendeth into the bottome verie much earthines, notwithstanding I like better the foresaid way in purging it with water, then this with fire: But to do this, take a Salet, or some other yron, or brasen vessell, and fill it with salte peter, and couer it with a couer of yron, brasle, or earth, so that it be made bigge ynough, mete to be taken off and put on when you list, that the vessell may be well couered: and then it must be sette in the midst of a good fire of coles, and so the salt peter will melt, which is sone perceiued of the expert artificer: but when you thinke that it is molte, looke vpon it: and if it be not wel molten, couer it againe and let it melt well: then it being well molten, take brimstone most finely beaten in powder, and straw some thereon: and if of it selfe it take no fire, doe you kinde it: and being kindeled let it burne till such time as the brimstone be all consumed, so that nothing else be burnt, but the vpper part, and certaine grosse vnctiousnes of the Salt peter, the which when it is burned, will leaue the rest faire and cleare: and then it must be taken from the fire letting it cole, where in the vessell you shall finde it (when it shall be cold) all in one peece white like vnto a peece of marbell: and all the earthinesse thereof remaining in the bottom, which shall be good saltpeter to make powder withall, but not verie commendable to any other vse: and about salte peter the witte of men haue so much imagined, that meanes are found to cause it to grow in the ground, and in places, that neuer had any before, by dissoluing Salt-peter in water, for with the same water wetting the ground, and letting it stand so a certaine space of time, salte peter will be ingendred, so that the same that was put there, will multiplie wonderfully: and it is a most certaine thing, that in making Salte peter, the earth that hath bene occupied, heaped vp in a

## The making

place that is covered, so that the raine do not wash it, within the space of five or six yeares, may againe be laboured, and salt peter shall be found to be ingendred, and yeld much more, then it did the first time, and this that I haue declared in this chapter, is as much as I can say of salt peter.

### ¶ The maner how to make all sortes of Gunpowder. Chapter xxiii.



Gunpowder, is made of three simples only, that is, salt peter, brimstone and coles, and some proportioneth it after one fashion, and some after an other, and also according to the Gunnes, and purposes wherewith they will occupie it. For that one sort is occupied for great ordinaunce, and an other sort for lesse peeces, and this is knowen to euery Bombardier: In Warkeabuses, and hand guns, is not occupied common powder, but about certaine fire workes: and therefore to euery of the said purposes, the pouders is proportioned accordingly. For that if Serpentine powder, should be occupied in hand gunnes, or Warkeabuses, it would scant be able to driue their Pelletes a quaites cast from their mouthes: and if hand-gunne powder should be vlsed in peeces of ordinaunce, without great discretion, it would quickly breake or marre them: and to minde to haue all sort of pouders good, three things is requisite to be obserued, in making thereof. The first is to see, that the substance wherewith it is made, haue no earthie grossenesse. The second, that it be finely beaten: the third, that it be verie well dyed, from all humi-

humiditie or moistnesse, and this done, you shall haue strong and excellent good powder, and it is to be vnderstanded, that the chiefe thing that is in powder, is Saltpeter: for that of it (by the same that is seene) dependeth all the force. And therefore provision is to be made, to haue a good quantitie thereof, and that it be cleane and nete: the which by burning, may well be knowen, for that in all sortes of powder, it is needefull, that the Saltpeter be good.

Now, for to make common powder, for great peeces of artillerie there must be taken thre partes, of refined Saltpeter, two of Willow coles, & one of Brimstone, and grinding euerie thing: all must be well mingled together, and all the moistnesse thereof dried by, as I haue saide. To make powder for small peeces of artillery, there must be taken fve partes, of refined Saltpeter, and one and a halfe of Coles, and one of Brimstone, and grinding it most finely, & mingling it well together, it must be cornd, and then dyed. The maner of corning all sortes of powder, is with a Sieue made, with a thicke skinne of Parchement, full of little round holes, into the which Sieue the powder must be put, while it is dancke, and also a little bowle, that when you lifte, it may roule by and doune, vpon the clots of powder, to breake them, that it may come, and runne through the holes of the Sieue.

To make Harkebuse and hand Gunne powder, there must be taken tenne partes of refined Saltpeter, and one of young hasell coles of a yeare olde made cleane, and one parte of Brimstone, and beating all in a mortar, or grinding it exceedingly well that it may be mingled to gether and so fine as is possible, then it must be cornd and thoroughly dyed. And note that if it be not marueylously well beaten, it will neuer be good. But because making of powder, which are of thinges that will easylie kindell, cannot be without  
peril



## The making

perill of him that maketh it, except it be remedied with wetting: therefore it behoueth to take hede that it be not beaten due, as well to auoyd such perill, as also for that it will be beaten better: for which causes it must be wet with commun water to a certaine degree of moistnesse, so that taken vp in ones hand it may cling together. Some moist it with vineger: and some, for to make it moze stronger, with camphored, aqua vita. Whē I haue caused gunpowder to be made, I haue vsed commun water, and therefore I am able to say which of those thinges is best: and to tell my opinion, I doubt whether vineger or aqua vita, causeth the gunpowder to be any better then y commun water: for as much as they vapoizing alwaye, as they doe, and as of necessitie they must, I beleue that littell of their substance remaineth.

There be some which in making cole (besides willow) make them of hasell: and some of vine stikes, and some of bay stikes: some of reedes: some of kerses: and to be short, all the coles that are made of soft wood, are of wood which haue much pith: but it is requisite that they be small, young, and tender, and without hardnesse of knottes: otherwise they be not good.

Albeit they be made in diuers maners: but in making of any great quantitie of powder, the ordinary cole is to be taken: and making a littell they vse to take young hasell of a yere olde, cut in short peeces, and they putting them into a great earthen potte, or other vessell of yron, or brasse, they shutte it and couer it close, and lute it, or daube it very well about, so that it cannot breath: and then they make fire rounde about it and vpon it, till such time as it may bee thought that the heat is well entered in througħ all, and that the wood that is within is very well fired: and without fire, brandes, or flame, burned onely througħ such heate: and then they take the fire from the potte and let it cole,

How to make  
cole where  
with gunpow-  
der is made.

cole, and so they finde the same wood become cole. I hapning once to haue neede of coles (to thintent to make some quickly,) toke as many drye hasel sticks that had their rindes scraped of, as I thought sufficient to serue my purpose: and breaking them in peeces and laying them close together on a heape, I set them on fire and burned them all well, and then sprinckled water vpon them with a browne, and with the same wet browne quenched the fire: and so scattered abroad the coles here and there, alwaies sprinckling water vpon them till I quenched them: and thus I haue serued my purpose without so much difficultie.

Moreouer it is a very profitable thing, yea and a necessarie, that I declare the maner and facilitie of beating it, for to be able safely to make a great quantitie thereof. In olde time they were wont to grind gunpowder with certayne handemilles, as they vse to grinde corne; but (besides the paine) it is a waye verie perillous: for that such a composition ground together with stones, will catch heate in such wise that it will sone ingender fire, inesppecially euery thing being a matter disposed to fire: as also by rubbing together with violence a couple of baye sticks, you shall straight waye kindle fire. Some grinde powder in such milles as they vse to grinde crabbes or apples to make bargis or sider: and some hath it stamped in morters with a water mille or a horsemill, which way is the best of all other, and most surest and also it is beaten finelie, and with lesse labour and paine: Some (that hath not the comoditie of water) make a great wheele, deuised after such sorte, that with the cogges thereof it may raise vp many heavy pestels, which falling, beate in diuers morters of woodde made in a beame of oke, of the which there be some haue the bottomes of brasse.

Some stampe with their armes, with a great pestel  
 W. sic

## The making.

tied to the ende of a pole with a corde , right ouer a mortar of wood or byasse , and so they beate the easier : other some beate it in a stone mortar with the mouth somewhat large , with a wooden pestell, with the handell thereof made like vnto a hammer or a mall. And these, and other, that may be made, is as much as about the beuise of beating and making gunpowder is needefull.

They haue vsed heretofore to waigh euerie matter by it selfe, and then they haue gone mingling and beating all together : There haue bene after , some that haue deuised to beate euerie thing seuerally by it selfe, and then mingelled altogether and made it . But finally the best and most readiest way , is to take a quantetie of Saltepeter , wherewith you will make your powder , and put it into a cauldron with so much water ( as being set vppon the fire ) may be thought sufficient to dissolue it : which so sone as it is resolved, must be taken of and set on the ground in a colde plate : and the quantetie of beaten coles that is sufficient , must be put into it , and so stirring it about, must be mingled well with the Saltepeter dissolued : and then taking your brimstone finely beaten in powder , and with a staffe stirring about the coles and the Saltepeter , you must strawe it finely vpon the same, as well as you canne , with continuall stirring and mingling them together , which composition thus made , you must then drie somewhat in the sunne: and then to haue it excellently well made, there needeth no other to be done , but to beate it altogether , to the intent that it may incorporate most finelie , which done , you must drie it with most great diligence : and then sift it verie well through a sieue, and moistning it againe with water or vineger, stirring it somewhat together in a sieue , you may coyne it as already hath bene declared : and then againe so to occupie it about  
your



your businesse, you must drie it well: and so being dried, put it into drie vessels of wood to keepe: and set it in the highest places of your house, where few cometh for diuers respectes: and though it were for no other, at least to keepe it drie. They that are expert, know good powder in this maner, by the colour: for that if it be verie blacke, it is a signe that it is made with verie much coles: or that it is moist: and when you rub it vpon a peece of paper it will blacke it more then it ought to doe, and draiwing it with your finger, you may see whether it be finely beaten or no: for it must be so much beaten that nothing, neither of salt peter nor of brimstone be discerned in any wise: for with reason they ought not to be seene: they take also for a triall, three or foure cornes of powder, and lay them vpon a white paper, distaunt three fingers the one from the other, and fire one of them: and if the powder be good, you shall see them all to fire at ones: so that there shall be no residue remaining, neither grosseesse of Brimstone, nor of salt peter, nor of any other thing, and the paper not burnt.

And if it be not so found, they know that it is cull made, or not good, but full of earthnesse of salt peter: or that it is moist, so that it is naught for shooting of ordinaunce, besides the perill that it putteth them in. And vndoubtedly naughtie powder, is a cost halfe cast away: and it is a great fault in him that maketh it, or that causeth it to be made: for that in time of neede, it is of no good, and causeth much shame to the Gunners, which occupie it: and therefore diligence ought to be vsed, and good heede taken that it be made according as I haue taught. There are many which bring vp lies, saying that they can tell how to make Powder, that shooting in gunnes shall make no noise, the which is impossible, the fire and the aire violently encountering together, where besides that

## The making.

they are not able to do the same they say, with a peece of ordinaunce, they are lesse able to do it with one of those potgunnes of elder, that boyes vse to shote paper and floures in, by the noise of which may well be perceiued, that al proceedeth of breaking of the aire. Also there bee many that say, that they can make white powder, that shall not blake ones handes, by putting in a certaine thing in the steele of coales: some other, red, with dried red flowers, and other blew, with blew flowers: some other say that to make the powder of more force and strength, that it is verie good to put to euery pound of brimstone an ounce of Mercurie, the brimstone being first put in by a litle, and a litle. Moreover there are some other that say, that for to make the like, there ought to be put to euery pound of salt peter, a quarter of an ounce of salt armonacke: some other there be also, which say, that in steele of coles, it is better to take linnen cloth and to burne it to tinder, and therewith to make powder, which is more excellenter than any other role that is possible to be vsed, about such a purpose. And although that in my iudgement I haue declared alreadye the best receites, that is for the making of al sortes of gun powder, yet to the intent that it may bee vnderstande how much men haue trauailed and imagined to bring the same to all perfection, I haue thought good to shew here following diuers more receites both good and bad, which for the making of powder bath bene experienced of sundrie men.

# *The first inuention and oldest maner*

in making of sarpentine powder, or powder  
for ordinaunce.

<b>I</b> Salt peter	i. part.
<b>W</b> rimstone	i. part.
<b>C</b> oles.	i. part.

The next practise of making powder  
for ordinaunce,

<b>2</b> Salt peter	iii. partes.
<b>W</b> rimstone	ii. partes.
<b>C</b> oles	ii. partes.

¶ Powder for ordinaunce of a newer making.

<b>3</b> Salt peter	v. partes.
<b>W</b> rimstone	iii. partes.
<b>C</b> oles	iii. partes.

¶ Powder for ordinaunce not so olde.

<b>4</b> Salt peter	vii. partes.
<b>W</b> rimstone	iii. partes.
<b>C</b> oles	ii. partes.

¶ Powder for ordinaunce not verie old.

<b>5</b> Salt peter	ix. partes.
<b>W</b> rimstone	ii. partes.
<b>C</b> oles	iii. partes.

¶ Powder vsed of late daies for handgunnes.

viii.

**6** Salt peter



# The making

6 Salt peter liii. partes.  
 Brimstone. i. part.  
 Coles. i. part.

¶ Powder for ordinance vsed not so long agon.

7 Salt peter xx. partes.  
 Brimstone iii. partes.  
 Coles r. partes.

¶ Powder for ordinance vsed of latter daies.

8 Salt peter c. partes.  
 Brimstone r. partes.  
 Coles xxvi. partes.

¶ Grosse Powder of a newer sort.

9 Salt peter c. partes.  
 Brimstone xx. partes.  
 Coles xxvii. partes.

¶ Fine Powder of a making not verie old.

10 Salt peter ix. partes.  
 Brimstone iii. partes.  
 Coles vi. partes.

¶ Grosse Powder of a newer making.

11 Salt peter ii. partes.  
 Brimstone i. part.  
 Coles i. part.  
 Barka

## of Gunpowder

32

Harkabus powder of a  
newer making.

12. Saltpeter iii. partes  
Wrimstone. i. part.  
Coles of willow stiches i. part.

¶ Fine powder of a newer making.

13. Saltpeter often refined v. partes.  
Wrimstone i. part.  
Coles of young hasell stiches i. part.

¶ Grosse powder of a newer making.

14. Saltpeter refined iii. partes.  
Wrimstone i. part.  
Willow coles ii. partes.

¶ Powder of a newer making.

15. Saltpeter r. partes.  
Wrimstone ii. partes.  
Willow coles iii. partes.

¶ Harkabus powder vsed now a dayes.

16. Saltpeter very often refined r. partes.  
Wrimstone i. parte.  
Coles made of Hasell twigges with the barke pilled i. part.

Hand gunpowder of a newer making

17. Saltpeter refined xxvii. parts.  
Wrimstone iii. partes.  
Coles ii. partes.

## The making

**Coles of hasell hauing their rindes pilled of. liiij. partes.**

**¶ Handgun powder of a stronger and of  
a newer making.**

18. Saltpeter refined	lii. partes.
Sulphur.	i. part.
Coles of young hasell	i. part.

**¶ Finer and stronger handgun powder.**

19. Saltpeter diuers times refined	liiij. partes.
Sulphur	i. part.
Coles of young hasell twigges hauing their rindes pil- led of	i. part.

**¶ Grosse powder vsed now a dayes**

20. Saltpeter	iii. partes.
Sulphur	i. part.
Willow coles	i. part.

**¶ Grosse powder vsed now adayes.**

21. Saltpeter	xx. partes.
Sulphur	iii. partes.
Willow coles	v. partes.

**Handgun powder vsed now a dayes.**

22. Saltpeter refined byie	xlviij. partes.
Sulphur cetrine	vii. partes.
Hasell coles.	ii. partes.

**¶ Handgun powder vsed now a dayes.**

23. Saltpeter refined	xlviij. partes.
Sulphur	ii. partes.
Hasel coles	iii. partes.

The



The maner that is vsed of charging and shooting  
of ordinaunce . Cap.xxv.



Let as much as if Gunners should  
chaunce to be slaine or otherwise  
lacking, to the intent that euerie  
Souldiour in time of neede may  
know how to serue in one of  
their stades, I haue thought good  
and necessarie to shew & declare  
the maner of charging & shooting  
of peeces of ordinaunce . Wherefore it ought to be vn-  
derstande , how much powder is occupied at once in  
charging of euerie peece , which most commonlie , is  
two third partes , of that which the shotte or bullet  
thereof waieyth : as for example, if the bolet of a peece  
of ordinaunce waigh . xxi.pound , then there must bee  
taken . xiiii.pound of powder for the iust charge of the  
same peece . And then with a long staffe that hath at  
the one ende a bob as big as the bolet of the peece, and  
at the other ende a lable made for the same purpose  
that will take so much powder vp at twise or thise, as  
is a foresaide, the peece must be charged, after this sort.  
Take the lable full of powder , and thrust it into the  
Gunne so farre as it will go, and then turne your hand  
with the lable that the powder may fall out and remaine  
there behinde when you pull out your lable : which  
done , you must with the bob ende thereof, thrust the  
powder home faire and softly : and so with the lable  
taking vp the rest of the powder you must do likewise,  
and thrust after at the last a wispe of hey or of some  
thing else, to sweepe all the powder together, and then  
the bullet which must bee of a fit biggenesse for the  
peece : And also an other wispe to stay the bollet for  
roling out : and putting some powder in the touch hole  
and about the touch hole , the Gunne is then charged.

I.

Now

## *A discourse*

Now to leuell it , a man must stand directly behinde it , and with a leuer , tourne it this waye, or that way, till such time as it be brought to lie iuste , as a man will hane it , so that looking straight from the breath or hunder part of the peece as lowe as may be vppon the vpper part thereof , he may see the mouth of the peece to lye euen with the marke and as it were to corner it : which done , if the ground whereon it standeth bee euen, as it is requisite to be, and that the one wheele stand not higher then the other , giuing fire to it with a lint stocke which is a match fastened to the ende of a staffe of a yard or two yardes long , you shall see the shot to strike the same thing that you shot at, if it bee within any reasonable distaunce . And for more speedie shooting of ordinaunce , the iust charge in powder of euery peece may aforesaid be prepared in a readinesse, and put in bagges of linnen or in great papers made for the same purpose, which in a sodaine may be chopt into the mouth of a peece with the bollet or shot thereof thrust after, as farre as they will goe, and then thrusting a long wper into the touchehole that may perse through the bagge or paper wherein the charge of powder lieth within the peece , filling the same touchehole with cozne powder so sone as it is leueled, it may incontinent be shot of : which maner of charging is done most quickly and a great deale soner then any other way , and when halfe requires, very needefull.



¶ How to get out quickly the nailes that should happen by-treason, or otherwise to be driuen into the toucheholes of ordinaunce.

Cap. xxvi.



**V**f it should fortune at some so-  
daine assault, the toucheholes of  
artillerie to be nailed vp, after  
such sort as they cannot be dis-  
charged, or shot of, the speediest  
way to vnnaill them, is first to  
charge againe all such peeces of  
artillerie, with smaller bullets  
then their ordinarie: and when  
they are so charged to leuell them toward those pla-  
ces where neede requires, euen as they should haue  
bene, if they had not bene nayled: and there must be  
made a traine of Powder, along the bottom of the  
Canes, from the mouthes to the bollettes of euerie  
peece of ordinaunce: and to the intent not to shote  
them in vaine, you may carrie for occasion, and oc-  
casion seruing to shote them, you may giue fire at  
their mouthes, where besides that they shall do their  
ordinarie effectes, they shall all in the discharging,  
bee vnnailed, blowing out the same nailes, or pinnes  
of yron, wherewith their toucheholes were stopped:  
and so doing, of such nailing there shall happen no  
great harme. But if some of them for being bea-  
ten in harder then other, should chaunce at the  
first not to bee driuen out, then the remedie is to  
charge them againe, and to shot them off, after the said  
manner, putting on the toucheholes a litle oile made ve-  
ry hot, heating also first the place that is nailed with  
a burning cole, making moreover with clay, vpon  
the peece, a litle Cuppe about the hole, that may  
hold the hotte oile that is powred vpon it, after such



## A discourse

For, that through the heate thereof, it may soke into the hole with the yron in it, whereby the same yron shal then be made so slipperie, that at the next discharging of the peece the furie of the fire most easilie shall blow it out.

¶ How much the artillerie ought to be esteemed of the armies now a daies, and whether the same opinion of them which is had vniuersallie, be true.

Cap. xxvii.



Considering how many battails and deedes of armes, were made of the Romanes at sundrie times, there is come vnto mee in consideration, the vniuersall opinion of many men, which is, that if in those times there had bene ordinance, the Romanes should not haue bene able to haue conquered, nor so easilie haue wonne the countries, and made the people their tributaries, as they did, nor they should not haue in any maner made so mightie conquestes. They say also, that by meane of this instrument of fire, men cannot vse, nor shew their strength and vertue, as they might in old time. And they adde a third thing, that they come with more difficultie to fight a field then they came in those dayes, nor there can not bee kept in them the orders of those times, so that at length the warre shall bee brought to consist altogether in artillerie. And minding to write, whether such opinion be true, and how much the artillerie hath increased, or diminished the strength of armies, and whether it taketh away, or giveth occasion to good Captaines to do valiantlie, I will beginne to speake  
con-

concerning their first opinion, that the auncient Ro-  
mane armies should not haue made the conquestes  
which they did, if the ordinaunce had bene in those daies  
To which answering I say, how that warre is  
made either to defend, or to offend.

Where first it is to be examined, to whom these two  
maner of warres causeth most profite, or most hurt.  
And albeit there is what to say of either part, notwith-  
standing I beleue, that without comparison, they do  
more harme to him that defendeth, then to him that  
inuaedeth. The reason is, that he that defendeth, is  
either in a Towne, or in a campe within a trench. If  
he be within a Towne, this Towne is either litle, as  
the most part of fortresses are, or it is great. In the  
first case, he that defendeth, is altogether lost: for that  
the violence of the artillerie is such, that there is no  
wall, how great so euer it be, which in few daies it  
battereth not downe. And if he that is within, haue not  
space inough to retire, both with ditches, and with  
rampiers, he is overcome, because he is not able to  
withstand the violence of the enemye, who through the  
breach of the wall, will after enter: nor in this case,  
the artillerie which he should haue, shall not helpe him:  
for that this is a generall rule, that where men in a  
throng, and with violence may goe, the artillerie cannot  
withhold them. Therefore in the defence of a Towne,  
the furie of the enemies cannot be withstood. Though y  
assaultes the which are not thronged, but scattered,  
which be called skirmishes be easilie withstood. And they  
which goe with this disorder, and coldnesse to a breach  
of a wall, where artillerie is, do goe to a manifest  
death, and against them the Artillerie preuaileth:  
but those, which assault a breach in a throng hard to-  
gether, so that the one thrusteth forward the other  
if they be not holden out of ditches, or of rampiers,  
they enter in euerie place, and the artillerie keepeth  
I.iii. them

## A discourse

them not backe, and though some be slaine, they cannot be so many, that they shall not let the victorie. This is knowen to be true, by many expugnations of Townes made in Italie, and in especially in the same of Biscia: for as much as the same towne being rebelled from the French men, and yet the fortresse being kept for the king of France, the Venetians for to withstand the violence, which from the same might come into the towne, had laid all the streete full of artillerie, which descended from the fortresse to the citie, and they planted them on the front, and in the flankes, and in every other fit place. Of the which Mounsier de Foix made no other count, but with his squadrons, coming downe on foote passing through the midst of them, got the citie: nor it was not knowen that he receiued by those any notable hurte. So that he that defendeth himselfe within a litle Towne (as hath bene said) and findeth the wall on the ground, and hath not space to retire with rampiers, and with ditches, and is constrained to trust vpon Artillerie, is ouercome straight way. If thou defendest a great towne, and where thou hast commoditie to retire, yet notwithstanding without comparison, the Artillerie is more profitable to him which is without, then to him that is within. First, to munde to haue a peece of artillerie hurt those without, thou art constrained to get thee by with it from the plaine ground of the Towne, because standing vpon the plaine ground, euerie litle banche and rampier that the enemie may make, shall cause him to remaine safe, and thou canst not hurt him, so that being driuen to stand a lost on the toppe of the wall or in what soeuer other manner on high. Thou drawest after thee two difficulties. The first is that thou canst not bring by so great and mightie peeces of Artillerie, as he without may shote, being not able in litle spaces to handle great thinges. The other



other is, that although thou couldest bring them, thou canst not make such strong and sure defence for to saue the saide artillerie from dismounting, as they without may doe, being on the ground, and hauing that commoditie & that roome, that they themselves list. So that it is impossible for him that defendeth a towne, to keepe the artillerie on high places, when they which are without haue great ordinaunce inough. And if they be driuen to come with them on low places, they become for the most part vnprofitable, as hath bene sayd. So that the defence of the citie, is brought to bee defended with armes, as in olde time they did, and with small artillerie. Of which if there be gotten a littell profite) hauing respecte to the same small artillerie) there is gotten so much incommoditie, as counterpeaseth the commoditie of the artillerie: for as much as hauing respect to the same, they make the walles of Townes low, and as it were vnder ground in ditches, so that so soone as they come to the battaile at hand, either because the walles are battered, or because the ditches are filled vp, he that is within, hath much more disadvantage, then he should haue had in times past. And therefore (as afore is saide) these instruments helpeth much more him that besiegeth a towne, then he that is besieged. Concerning the thirde thing, to lye in a Campe within a trench, to the intent not to fight the fildes but at thy commoditie, or aduantage, I saye, that in this part thou hast no more remedy ordinarly to defend thee from fighting, then they had in olde time.

And sometimes, considering the artillerie, thou hast greater disadvantage: for that if the enemye inuete with thee, and haue a littell aduantage of the countrey, as may easly chaunce, and finde him selfe higher then thou, or that in his coming thou hast not yet made thy bankes or rampiers, and couered thee well with those, straight way, and before thou hast any reme-

## A discourse

die, he beleddgeth thee, and thou arte constrained to  
issue out of thy fortresse, and come to fight: the which  
happened to the Spaniards in the battaile of Rouen-  
na, who being fortified betwene the riuer of Ronco,  
and a bancke, because they lay, not so high as sufficed,  
and for that the Frenchmen had a little the aduantage  
of the ground, they were constrained of the artillery to  
issue out of their fortresse, and come to fight. But  
admit that the place, which thou hast taken with the  
campe, were much higher, then the other against it (as  
for the most part it ought to be) and that the banckes  
or rampires were good and sure, so that by meanes of the  
situation, and thy other preparations the enemie durst  
not assault thee, it shall come in this case to those man-  
ners, which in olde time it came, whē one was with his  
army in place not possible to be hurt: the which are to  
ouer run the countrie, to take, or besiege the towncs  
that are thy friendes, to stoppe thee thy victuals, so that  
thou shalt be constrained of some necessitie to vniodge,  
and come to fight the field, where the artillerie (as here  
after shalbe saide) doth not much hurt.

Considering then what kinde of warres the Romans  
made, and seeing how they made almost all their warre  
to invade other men, and not for to defend themselves,  
it shalbe seene (when the thinges saide afoze be trew)  
how they should haue had more aduantage, & much so-  
oner should haue made their conquestes, if ordinaunce had  
ben in those daies

Concerning the second thing, that men cannot shew  
their strength, as they might in olde tūne, because of  
the artillery, I say, that it is true, that where menne  
scattered doe shew it, they stande in more perill,  
then in those dayes, when they had to skale a Towne,  
or to make like assaultes, where men not thronged to-  
gether, but seuerally the one from the other did appeare.

It is also true that the Captaines, and headdes of  
armies

armies, stand moze subiect to the perill of death: then in those tunces, because they may be reached with artillerie in all places, no: it helpeth not them to be in the rerewarde, garded with most strong men. Notwithstanding it is scene, that the one and the other of these two perills, doe selborne time extrao:binarie hurtes, for that the Townes well appointed and furnished with munition are not scaled, no: they goe not with weake assaults to assault them: but minding to winne them, the matter is brought to a siege, as in olde time they did. And in those, which neuerthelesse are won, by assalte, the perills are not much greater then they were in those daies: for that also in those times, they which descended a towne, lacked not thinges to throw and shote, the which (though they were not so furius) they did concerning the killing of men the like effect. Concerning the death of Captaines and conducters, there hath bene in xxiij. yerres that the warre was of late dayes in Italy, lesse examles, then there was in tenne yerres with the antiquitie: for that except Count Lodouike of Mirandola, who died at Ferrare, when the Venecians, a few yerres ago, assalted the same state, and the Duke of Nemours, which died at Cirignuola, there hath not hapned of the artillerie any to be slaine: for as much as Monsieur de Foix at Rauenna, died of yron, & not of fire. So that if men shew not perticularly their strengths, it groweth not of the artillerie, but of the naughtie orders, and of the weaknes of the armies, the which altogether lacking strength, cannot show it in parte. Concerning the third thing sayde of them, that men cannot come to hand strokes, and that the warre shalbe brought to stand altogether vpon artillerie, I say, that this opinion is altogether false, and so alwaies shalbe taken of those, who according to the auncient vertue will occupie their armies, for that he that wil make a good armie, it beho:ueth him with exercises, eyther fained, or true, to accus-



## of Muynes.

to come his men to give the charge on the enemy, and to come to the swordes point with him, and to the grasp by the bosom: and he ought to ground him selfe more vpon the footemen, then vpon the horsemen. And when he shall ground himselfe vpon the footemen, and vpon the foresaide maners, the artillerie becommeth altogether vnprofitable. For that with more facility, the footemen in approaching nearer the enemy, may auoid the shot of the artillerie, then they were able in olde time to auoid the violence of Elephants, of cartes full of hakes & of other straunge encounters, which the Romane footemen encountered withall, against which, alwaies they found the remedie, and so much more easilie they should haue found against this, the shorter that the time is, in the which the artillerie may hurt thee, then the same was, in the which the Elephants & the cartes were able to hurt: for as much as they in the midst of the fight, disordering men, these onely before the fight doe trouble men: the which impediment the footemen easily auoid, either with going cohered by the nature of the situation, or with falling downe vpon the ground, when they shoot: the which also by experience hath beene seene not to be needefull, in especially to be defended from great ordinance, the which cannot in such wise be leuelled because if they grow high, they touch thee not, and if they grow low, they will not come nere thee. When the armies beeing come to hand strokes, this is more cleare, then the light, that neither the greater, nor the little can after hurt thee: for that if the same, which hath the artillerie, be before, it becommeth thy prisoner, if it be behind, it hurteth thy friend before thee. Again on the backe it cannot hurt thee after such sorte, that thou art not able to go to winne it, and it cometh to follow the said effect. For this neede not much disputation: for that there hath beene seene the example of the Spaniards, who at Nauara in the yere of our Lord. 1513. without artillerie,

artillerie, and without horse, went to encounter the French armie furnished with artillerie within their fortresse, & they ouerthrow them without hauing any impediment thereby: and the reason is (besides the things told afoze) that the artillerie minding to haue it worke, hath neede to bee garded either of a wall, or of ditches, or of banckes. And when it lacketh one of these gardes, it is taken, or becommeth vnprofitable as it happeneth when it is defended with men, for when they chaunce to be in a battaile, and in the sight on the land, they can not be occupied by flanke, but in the same manner, that the antiquitie occupied the instrumentes to shot, which they placed out of the squadrons, for that they should fight out of the orders, and alwaies whē either of horsemen, or of other they were charged vpon, their refuge was behinde the legions: he that otherwise maketh accompt of them, hath no skill, & trusteth vpon a thing which easily may deceiue him. And though the Turke, by meanes of artillerie, against the Sophi and the Seldā, hath had victorie, it hath not happened through other meanes, then through the feare, that the horsemen were put in by the strange rumour thereof. Therefore to make an end of this discourse, I conclude, that the artillerie is profitable in an armie, when the ancient vertue is mingled therewith, but without the same against a puissant armie, it is most vnprofitable.

B.ii.

Of

## of Muynes.

¶ Of Muynes and placing of powder vnder ground, wherewith inuincible fortresses, by fire may be ruinated, when ordinance cannot be brought vnto them.

Cap. xxviii.



The better and greater quantitie of powder which is put in a caue that is made to ouerthrow a Fort or Castell, the greater vndoubtedly shall bee the effect thereof: which caue is best to be made a good way within the ground, and in a hard place, to the intent that whē the same is shut & wel walled vp, the fire be not able easily to haue any other way out, then in ouerthrowing the thing that is to be ruined, for as much as if the aire, & the fire in the room of that inclosed place, may haue meanes to breathe out, the force thereof will be of no effect. Also it would be taken heed of, that the caue be not by no other meanes made, so that the fire may breake out, for which cause, it ought to be made, with the beginning thereof somewhat distant from the place, & you minde to overthrow: to the intent that in making thereof, the men of the same place doe not issue out to let you, nor perceiue the certaine place of the hurt, to be able to provide for it, & to make countermines, to let the fire breathe out and passe without any effect, whereby all your cost & labour may become vaine. Moreover they make these muynes themost narrowest and most crookedst that may be, and in especially nere the very place that is appointed to be overthrown, and therefore vnder such a place there must be digged a hole that may bee at least three



thre yardes high or more, and two yardes broade, and that the entrie vnto it bee vnder ground in the manner, as by this present figure you may see described.



And in this to put barreles with their heads knocked out full of good strong powder, betwene which you must also straw powder, inough vpon the bordes whereon they stand, laying to it a good great match made of cotton, boyled in vineger, bymestone, and salt peter, which must bee well roled in good serpentine powder well dzyed in the sunne: and hauing laied it to the place you must make a traine of powder vpon it, euen to the going out, so that it may be conered therewith: placing it in pipes of earth or tronkes of wood in the place of the entrie thereof: and that done, you must wall it vp most strongly, laying ouerthwart great blocks of okes or other wood: so that with those & with the wall, it may be strong to resist the furie of the fire, as much as is possible: and the entrie in such maner made vp & fortified, when you shall thinke it time to bying the

R.iii.

effect

## of fireworkes.

effect to passe, to destroy the aduersaries, or to make a ruine, you may cause the frame to be set on fire, where you shall see a meruailous and horrible effect follow. More about this matter I neede not to declare, sauing that if it should chaunce the myne to be made in a stonie place, where the stones will fall downe, that then the best is to vnderproppe them with pipes of wood filled full of powder.

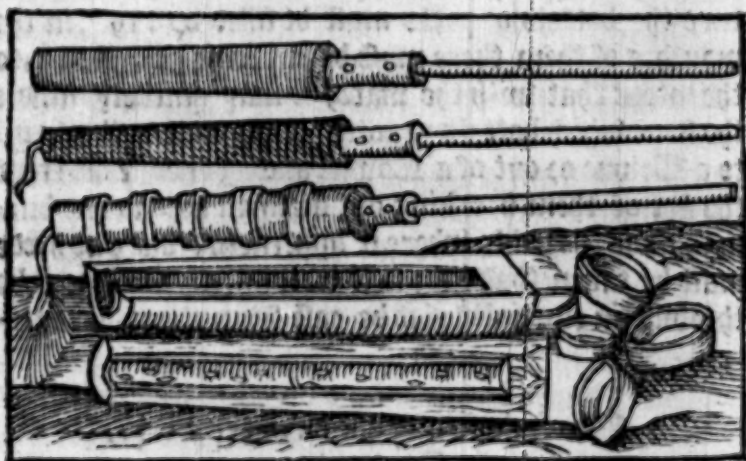
¶ The maner how to make trombes or trunkes of fire, as well to assault as to defend a breach, or gate, & to set a fire a towne or Campe or any thing else.

Cap. xxix.



First cause a cane of good wood to be made at the corners as big as a mans thigh and the length of an ell, after such sort that the hole thereof bee as wide that a man may thrust in his naked arme, and cause that the bottom of y<sup>e</sup> said trunke be made in such wise with a litle hole, y<sup>e</sup> the staffe of a Parteslan may enter into it, and so to be made fast thereunto, binding the said truncke with yron wyre at both endes, and in the middell for more suretie that it breake not, thzough y<sup>e</sup> furie of the fire. Then fill it with this mixture here following. Take serpentine powder 4. pound, rosen 1. pound, caphire half a pound, beaten glas 4. ounces, & mingle euery thing together, then begin to fill & put in the trunbe a handfull of serpentine powder vn- mirt, next a handfull of the foresaid mixture, after a litle powder, then a stoppell of cotten wet in oyle of gineper, and put in vpon the said cotton as you haue done at the first, that is to say powder, and then mixture

ture &c. And thus you must do till you haue filled it full,  
stamping in the stufte alwaies lightly, and if for lacke  
of gineper oyle you wet the cotten in aqua vita, it is be-  
rry good putting after euerie quantitie of powder a little  
quick siluer, then when it is full, put in y<sup>e</sup> mouth some good  
powder, making it a single couer of parchement bound a-  
bout with packthead, and with a little hole in the mid-  
dest of the parchement, wherein you must put a match  
made with gunpowder, the which easily and quickelie  
with your common match may kindle the fyre, being  
come to the face of the enemy: which is an excellent  
thing for the fight on the sea, or for to disorder a band  
of hoysmen.



¶ How to make bottels or pottes of fyre worke  
to throw into shippes or among men  
that are in battelray.

Cap. xxx.



## of fireworkes.



Take earthen bottels or pottes as is commonly vsed to keepe vineger or oyle and such like is best for this purpose, which must bee filled with this composition: serpentine pouder two partes, rosen one part, pitch one part, beating most finely all these things together in a mortar, then take turpentine, & a little gineper oyle, or linseed oyle, & mingle the therewith in a caudron vpon the fire with a sticke of a yarde long, and fill the bottels halfe full of this foresaide receipt, that done, take serpentine pouder one part, rosen one part, brimstone halfe a part, pitch halfe a part, and of this last mixture the bottels or pottes must be filled vp: then in the mouthes of them there must be put some good pouder, to the intent that with the match it may quickly kindle the fire: which bottels or pottes serue well to throw into a Towne or out of a Towne among enemies, so that the fire of them breaking out flieth all abroad and burneth most horribly where it lighteneth, but good heede must be taken that it be first well kindeled befoze it be throwne, in especially if it be cast from aboue.

### ¶ An other composition of fire worke, Cap. xxix.



Use as many earthe bottels or pottes to be made as you list to haue, which must be as it wer but halfe backed, then fill them with this mixture following, serpentine pouder thre partes, Saltpeter one parte, turpentine halfe a part, pytch halfe a parte, brimstone one part, baye Salte halfe a part, and when you will throwe them, set them  
on

## of fireworkes.

41

on fire and see that they be well kindled.

¶ Balles of mettell to throw among men in battelray or otherwise, which breaking shall do wonderfull hurte, Cap. xxxii.

**T**o disorder and to make the enemies to give place, there may also be provided, certaine hollow balles of mettell as bigge as small boules, and a quarter of an inch thicke, cast in mouldes and made of thre partes of brasse and one of tinne : but the brasse ought to be molte before the tinne be put to it, which balles filled halfe full of fine corne powder, & the other halfe full of serpentine powder mingled with rosen beaten into powder, so that for thre partes of serpentine powder there be one part of rosen, and then putting in the mouthes of the holes of them a little fine corne powder to make the rest to fire the sooner & after being fired & throwen, they will breake and flye into a thousand peeces, and both hurt and kill whom so ever is neere or about them. Wherefore they are very good to throw over the walls into a towne or fortreffe, or into a campe, to hurt and to give a terrour to those that are within : but these balles after they are fired and well kindled, and having blowen a little, must be quickly throwen, least they hurt such as would hurle them: and therefore the experience of one, ought first to be made in a close place, to see how long it will tary before it breake, and the holes that it will make in divers places, whereby the other may the better be known how to be used.

L

How

## of fireworkes.

The maner how to prepare pottes  
and balles of fyrework: to  
throw with hand.

Cap. xxxiii.



¶ In the world there hath bene al-  
waies men of such pregaunt  
wittes, that haue excelled in sur-  
dy and infinite inuentions, as  
well for the sauegarde of humane  
bodies as also for the destruction  
of the like. By whose helpe there  
haue bene Captaines, which uni-  
tating their counsells haue caused their sotenmen to  
carrie in their handes, certaine earthen pottes and  
balles, filled full of a certaine composition of powder, or  
some vntius liquoz, apte to take fire quickly: with  
the which incountering the enemies in battaile at hand,  
haue vigorously wholed those among them, for to proue,  
whether with such meanes they might be able not one-  
ly to disorder them, but also to make them giue place,  
and to ouerthrow them: for as much as such fyreworkes  
will maruapulously hurt the enemies not onely with the  
smoke of them, but also a great deale and much more  
with the horrible and vnquenchable burning of them, so  
that thereby such men haue alwaies had most happye  
successe, with most glorious laude and prais. These fire-  
workes are made in this wise: Take as many earthen  
pottes or bottelles as you list, caused to be made  
for this purpose, either baked or unbaked which ma-  
keth no matter, so that the moistnesse of the earth be  
dried vp: and these must be filled halfe full of serpen-  
tine powder, and somewhat more: and the same pou-  
der must be mingled with pitch and brinnstone bea-  
ten to powder to the quantitie of the third part there-  
of:



of: then there must be put vpon it a finger thickeſſe of hogges greaſe, to the intent that it may make the fire to dure the lenger, and it being in this maner ordered, there muſt be made a hole into it & a peece of gunpowder match put therein, with a litle good powder, and firing it, and holding it ſo long till it be well kendeled, you ſhall then throw it. Alſo there is made a liquide compoſition in a cauldron, wherein is put hogs greaſe, oile of ſtones, bzimſtone, ſalt peter twice refined, aqua vita, pitch, turpentine, and ſome ſerpentine powder: & the Witche, the Bzimſtone, and the Saltpeter being liquide, putting thereto the greaſe, the turpentine, the oile and the powder ouer the fire, all muſt bee ſtirred and mingled together very well in an earthen pot, or ſome other thing prepared for the ſame purpoſe with a ſticke, to the intent that it may the better incorporate: and then it muſt bee covered about with good powder, that it may fire the eaſilier when you will haue it. And that done, you may occuſie it when you wil, and whole it either with a ſling, or with a corde tied vnto it, or otherwiſe with the hand as you ſhall thinke beſt: alſo of this compoſition they may be filled certaine litle purſes of linnen cloth, which being bound about with a corde will be faſhioned like a ball, and theſe may bee whoyled or ſhotte out of trunckes of fire, or otherwiſe as ſhall pleaſe him that maketh them. Alſo with this compoſition may be annointed whatſoeuer a mā would haue quickly burnt, as gates of Townes, bridges of wood, cartes, monicions, and ſuch like, for that it is a matter that will ſone kende and ſet a fire any thing, and alſo able to maintaine it: moreover litle balles therefore may be tied to the heads of dartes to throw among the enemies, or where one would haue any thing fired.

## of fireworkes.



¶ How to make balles of wild fire, to shoote in ordinance or to throw with handes.

Cap. xxxiiii.



Take serpentine powder five partes, salt peter refined three partes, bymstone two partes, Rasapina one part, Camphere halfe a part, turpentine halfe a part halfe a part of glasse grossly beaten, bay salt halfe a part, halfe a part of oile of stones, and oile of lintseede, as much of the one as of the other, Aqua vitæ halfe a part, and all these thinges being mingled together verie well, take then a peece of canuas as bigge as you will make the ball, and make it like unto a purse, and fill it with the said mixture, and then make two or three holes therein with a round Iron somewhat bigger then a bodkin,

bodkin, and put in every hole a little sticke.

And it is to be understod, that this foresaid mixture may be also made vpon the fire in a cauldron, and the balles that are made thereof must be rolled in serpentine powder, and then in the mixture, oftentimes couering them with Toe, well plaistered on, of a good thicke- nesse, then when they shall be a litle dried, take the said sticke out of the holes and fill them halfe full of serpentine powder, & the other halfe with Corne powder, & geuing fire to y<sup>e</sup> said balles, and throwing them among the enemies, they will do maruailous and wonderfull hurt. For that the said balles will burne within the water, so that falling vpon the armour of souldiers, water cannot quench them, nor any thing else, except abouondance of mire or durt. And adding to the said mixture that is vnfold halfe a part of beaten glasse and halfe a part of bay salt, you may fill a trumbe therewith after the maner as I haue taught a litle afoze.

To trimme Targettes with fireworke to assault, or to defende a breach.

Cap. xxxv.



Et pipes of brasse as many as you list, & naile them vpon a target, either 6. 8. 10. and fill the said pipes full of the foresaid mixture vnfold, & order the pipes after such sort that the fire not altogether, but one after an other, so that when one is almost burned out, the same may geue fire to an other by a litle pipe as small as ones finger, that must go from the bottom therof to the mouth of an other, & so successively to all, which shall continue a long time,

L.iii.

but



## of lutyū sapientia.

time, but the said target must be covered with blacke buckram that the fireworke bee not perceived, and the giuing of fire the one to the other.

To make an other kind of fireworke.

Cap xxxvi.



Take willow coles, salt peter, aqua vitæ, brimstone, pitch, resapina, Camphere, oile of stoncs, verniceliquide, turpentine as much of the one as the other, mingling every thing together, & then take a litle purse of canvas, and fill it full of Serpentine powder, and cover the purse all over with the foresaid mirture of a good thiclinesse, and with as much Doe as you shall thinke good, and then make a hole that may goe to the middest of the balles, which must be filled full of powder, so that thereby all the composition thereof with a match may be set on fire when you list.

How to make a mixture in stone that shall kindle fire with water or spittell.

Cap xxxvii.



This stone is verie necessarie for a Captaine to giue fire to his gunners, when through foule weather, all their matches should happen to goe out, and where they can not kindle them againe, because of the raine. First take unslaked lime one part, Tutia alexandrina vnprepared one part, Saltpeter verie well refined one part, quicke brimstone 2. partes, Camphere 2. partes, Calamite stone one part: All these thinges must bee well beaten and sifted, and bound hard together with a peece of new linnen cloth, & put into a cople of earthen cuppes, such as Goldsmithes vse to melt in, the mouthes

mouthes of which must bee ioyned together and fast bound with yron wyre, and daubed ouer with Lutum sapientia that it breathe not out, and then dried a little, till it become yelow, that done, put it into a forneys where they burne bricke or earthen vessels, and let it tary therein as long as the bricke or earthen vessels be a baking, and then taking it out, you shall see it made like vnto a bricke stone.

¶ To make an other kind of stone to kindle fire with water or spirtell.

Cap. xxxviii.



Take Camphere three partes, Saltpeter well refined two partes, vnslaked lime two partes, brimstone two partes, al these things being wel beaten together, & put into a couple of golde smithes melting cuppes, well stopped with Lutum sapientia) must then be baked in a forneis, and when the earthen vessels bee taken out, this shall also be made.

¶ How to make lutum sapientia.

Cap. xxxix.



Take of the best white potters earth that you can gette, for in one place there is better then in an other, that is to say, of that which can best endure the fire, as such as they make pottes of in Padua, and likewise in Germany: for it is of such perfectiō, & the Pottes, which be made of it, & wherin y they dresse their

## *of lutum sapientia.*

their meate, may also serue to found metalles in. Take then of the best, and specially if it must serue for a thing that hath neede to be long vpon a great fire, other wise, take such as you can get. There is found of it, that is of a great colour, as the common softe is, and also there is white, that men vse in some place of Vicence, which is like loanes of Gypsum, or plaister, and is called of the Italians Florette de Chio. Wee heere in England vppon the vse thereof, may giue it what name we will. Potters vse of it in Venise, for to white the dishes, and other thinges, before they vermissh or pollish them.

There is also found of it that is redde, as in Apulia, where there is great quantitie, & that they call Boale, and is the very same that some Apoticarics do sell for Boale Armenicke, & the Venecians vse of it, for to paint redde the sozefrontes of their houses with lime, bricke, and Vermillion, covering it after ward with oyle of line. This redde earth is the fattest, and the clammiest of all the rest, and therefore it cleaueth soonest by the fire, if it be not tempered with some other substance.

And because that all the said earthes bee to fatte, the one more then the other, therefore menne put to them some leane substaunce.

Now, if you take of that of ashe colour, which is most conunon, & the least fatty, you may compose and make it in this maner. Take of the saide earth foure partes, of clothmakers flor or shearing, one part, ashes that haue serued in a buck, or other, halfe a part, drie horse dung, or the dung of an Asse, one part. If you will make it parstler, put to it a few stamped brickets, and sparkes of yron: let all these thinges be well stamped, and sifted, that is to say: the earthe the ashes, the horse dung, the brickets, and the sparkes of yron: than mingle all together, and make it into earth, and make a bedde thereof, vppon the which you shall cast by littell and littell, the flore, as equally as you can. This done, powre to it wa-  
ter,



ter, stirring wel first with a sticke, and then with a pallet broad at the ende. And when all is well incorporated together as you would haue it, lay it vpon some great boorde, and beate it well, and that a good space with some great staffe or other instrument of yron, mingling and stirring it well, for the longer you beate it, the better it is. By this meane you shall haue a very good clay, for to lute or clay, and toyne violles, flagons of glasse to still with, and bottells of gourdes for stilling, and other great thinges, as fornellles and such like. But hee that wil make it with more ease, let him put the earth onely, the flore, and the horse dung, with a few ashes. Some put no horse dung to it, and some no flore according to the purpose that they make it for. For to stop and close vp the monthes of stilling glasses, or violls, to the intent they take no vent on the fire, the said clay will be very good: neuerthelesse men put to it two partes of quicke lime, and the whites of Egges, and then it will bee surer to let nothing vent out but the glasse it selfe. All kinde of clay or earth would be kept moist, and ready dressed for him that will occupy it continually, but it must not bee kept to watery, nor yet left to drie, for then it would serue for nothing, seeing that after it is once hardened, a man can not dresse it any more to do any good withall. And when you put water to it, it is mollified by litle and litle about, and is as it were a sauce, but within remaineth harde, and if you put too much watter to it, you marre it utterly. Therefore, when you see that it beginneth to ware drie, seede it a new litle and a litle with water, stirring it til it bee well, and so shall you make it perfect.

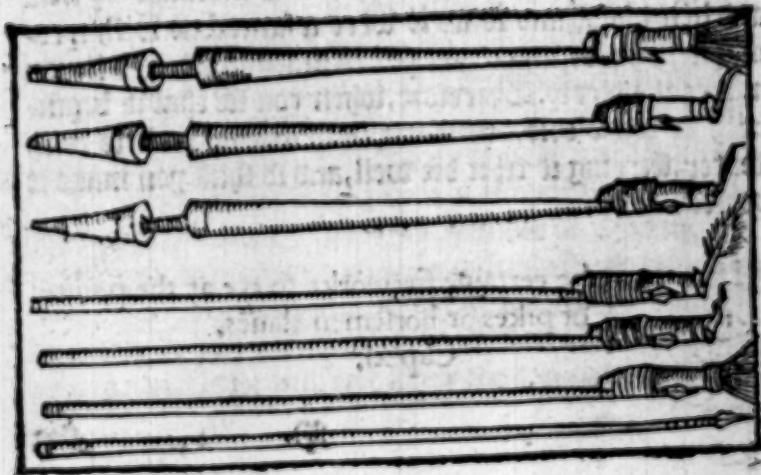
¶ How to make certaine fireworke to tye at the pointes of pikes or horsemen staues.

Cap. xl.

## of fireworkes.



Or to assault or to defend a breach, and also to worke some policie in the night against the enemies, it is sometimes good to tye at the points of pikes or launces, certaine canes like vnto squibbes made of paper vpon a forme of wood as long as the breadth of a sheete of paper, filled full of serpentine powder, amongst the which must be mingled litle peeces or crummes of pitch, of brimstone, graynes of bay salt, filings of yron, and beaten glasse, arsenic, cristall beaten to peeces, and such like, and after they are closed vp, and tied fast at one of the endes, this composition must be well beaten into them, with their owne formes or mouldes: vnto every one of which there must be put a good match sod in Saltepeter and Gunne powder, and then well dried, and fastening them to stauces, after such sort that the issue of the fire be tourned towarde the aduersaries, when you thinke good, you or some other may fire them: where you shall then see the fire blow out two yardes long, which in the night will seeme terrible: but in a calme wether, or at least when the winde is in the faces of the enemies they are best to be used. And moreover for the sight of the sea, they are most excellent,



¶ How to make diuers compositions of Firewoorkes.  
Cap.xli.



Very thing that will quickly burne, and that by some proper vertue is apt to multiplie fire, and maintaine it, may be put in fire compositions: for that in effect of such thinges they are made: of which thinges there are some that are minerall, as brimstone, and the oile therof, & salt peter, & some other substances hot, drie, and thin, and some vnctuous as grease, and all sortes of oiles: some verie drie, as pitch or wood: and of these ther be some naturall, & some artificiall. But now leauing to seeke such difference of their compositions, among as many thinges as wel old as newe I know, I haue found onely these, out of which I haue chosen some of the notablest, specially these, that for to make them, there must be taken Rosen, Alchitrean, quicke Brimstone, tartar, sarcocola, salt peter, and oile of stones, and of euerie one some part, but double so much of vnslaked lime, & all must be compounded with the oile of egges, and put into a vessel of glasse or of earth that is leaded, & covered very well: putting it after vnder hot dung for a moneth, the taking it from thence and setting it ouer a soft fire, the vessel being well stopped, it must be melted: which done, the licoe thereof may be put into hollow stauces, or in earthen bottells, or other vessels made of purpose, vnto euery one of which, must be put a peece of a gunpowdered match, in the middell with some gunpowder also, to the intent that they may the easilier fire.

Also there may be made an other sort of fireworke after this maner taking Brimstone, or oile of brim-

stone

stone



## of fireworkes.

Stone if it may be had, oile of stones, or of the same  
stone Oile of Juniper, Salt peter verie well refined:  
and so: every portion of such thinges, fine of asfalto:  
and moreover gōsegrease, pure pitch, bernis, powder  
of Pigeons dung, and so much Aqua vitæ, that may  
thoroughly moist all the foresaid thinges: which then  
must be put into a vessell of glasse, and the mouth  
thereof well stopped with ware, and then put under a  
hot dunghill 25. or 30. daies: and after to make it the  
better incorporate, it would be set ouer a soft fire:  
and that done, this composition may be put into hol-  
low stanes, or earthen pottes or like vesselles to be  
thorowen with the hand: also there may be taken a  
bullet of stone with a ringe fastened therein, where-  
vnto would be tied a corde of a yard long, and about  
the same stone, putting Toe imbewed with the fore-  
said composition, or else peeces of linnen cloth all to  
rayed therewith, which tiring, when it is well kend-  
led may then be thorowen. Also balles of this compo-  
sition may be shotte in peeces of ordinaunce, or a stone  
that hath a ring of yron fastened in it, to the which  
ring may be tied a peece of a rope steeped and sod in the  
foresaid composition, or else a litle bag full thereof,  
which may be shotte or thorowen as one list. Moreo-  
uer balles of this, being made with linnen cloth as afore  
is shewed, may be cast with all sortes of slinges which  
way one will.

Also there is made an other composition in this  
maner, with bernice liquide, oile of quicke Brimstone,  
and oile of the pelkes of egges, turpentine oile, iuni-  
per oile, Linseed oile, and Oleum saxum, or oile of  
stones, and halfe as much of Aqua vitæ as all the said  
compositions: and also as much powder of bayes finely  
beaten as will suffice to thicken all, with as much  
more Saltpeter: and all these thinges must be put to-  
gether in a vessell of glasse, or some vessell of earthen  
deed

bed with a littell mouth, which with ware must bee so stopped that it venter not : and this must bee kept after thre monethes in hotte dung, to putrifie, remouing it euerie moneth foure or fve times, and shaking it together euerie time: and this matter being brought in such wise, when you will occupie it, it is requisit that you anoint the same thing that you will vse, or to put thereof into that vessell, wher you wil haue the fire to worke: so that the same fire is such, that putting thereto some gunnepowder, or a gunnepowdered match, it will straight way kindell : and it is so vnquencheable, that it burneth till hee, or the thing that it lighteth on, bee altogether consumed : and if this composition fired, chaunce to be throwen and light vpon armur, it will make it so glowing redde in such sorte, that he that hath it on his backe, shalbe constrained to put it of, if he will not be burnt to death.

Also there is made an other sorte : and it is a most thinne liquo: apt to fire, with the which if in the canicular daies a peece of woodde, or other thing apt to burne bee anointed, the heate of the Sunne is then able to set it on fire, and to burne it : and so sone as it is touched with fire, it kendeleth incontinent, and is vnquencheable: except it be choked vp with sand, or wet with very stale vrin, or most strong veniger : also it will burne in the water: the making, whereof is in this wise : there must bee taken Camphire, oyle of quicke Brimstone, oyle of turpentine, oyle of dunge, oyle of iuniper, oyle of stones, oyle of lutesede, alchitrean, colofonia, most finely beaten, oyle of egges, pitch, goose greafe, Saltepeter, and as much aqua vitæ as al the rest of the composition, and as much arsenic, tartar, and armoniack salte, as the eight part of altogether.

Which thing must be put into a glasse or pot well stopped, and then set to putrefie in a hotte dunghill for the space of two monethes: and after al the foresayd things

## of fireworkes.

must be distilled with a gentle fire: where within 8. houres, there will come of those thinges a most subtil liquoz, into the which putting then so much ore dung dried in an ouen and most finely beaten to powder, as may make it so thicke as sope or somewhat thinner: and after minding to occupie it, y thing that is to be burnt, must be annointed therewith: and this also the Sunne will set on fire, and burne what soeuer is nere it.

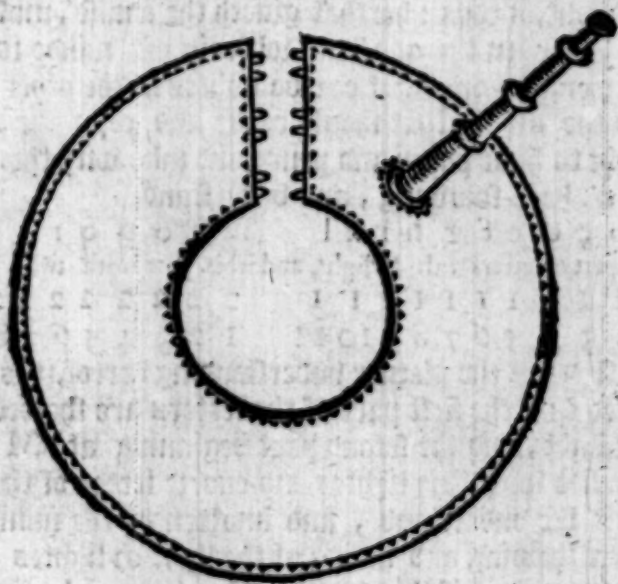
Also there is another composition of fire, that any thing that is annointed therewith, will maruailouslie burne & fire with wetting of raine, or otherwise: which to make, there must be taken new white lime made of Flint, Calamite made to powder by fire, vitrioll grosse beaten the two and thirtieth part, Salt peter refined eight partes: and as much Camphere, as all the fore- said thinges: oile of quicke bynistrone: oile of turpentine, Salt armoniacke, by waight as much as the vitrioll, and as much Tartar and bay salt: Salt of byn, Aqua vitæ made of strong wine as much as all the rest of the composition: the which things compounded together, must be put like as the other were, into a great glasse well stopped that it breath not out: and then it must be set in a hotte dunghill for two or three moneths, remouing the glasse, and chaunging the dung at least euerie ten daies, to the intent that the same matter may ripen well, and be like vnto a liquoz all of one thing: the which after ought to be boyled so much vpon a soft fire, that all the oylie humiditie, and other moistnesse that is in it, may vapor away, and the rest to become drie and stonie, and when it is drie and stonie, breaking the glasse and taking it out, it must be ground to powder: the which when it is to be occupied, must be strawed vpon y place that is dressed for the same purpose, so that it being rayned vpon or any maner of wayes wette, will kindle and fall on a fire.

How



- How to make a girdle for Souldiours or Fishers whereby they may goe in the water and passe ouer a riuer without either bridge or bote.  
Cap.xlii.

**T**his Girdle ought to be made according to the fashion of the figure next following, and of such lether that must be dressed in like sorte, as the same is where with scotabals are made: where vnto a pipe must be fastened like vnto a baggepipe, so that the girdle, when it is girt about a Souldiour vpon his armour, may be blown full of winde: by helpe whereof, he may then safely passe ouer a riuer, going through the same, how deepe so euer it be, where hee shall not sinke in the water, further then from the girdle steele downewarde: which for men of warre, is verie commodious and a most necessarie thing.



## Of sending aduise

How to write, and cause the same that is written to  
be read a farre of without sending any  
message. Cap. xli.



When a Captayne were so besieged  
of enemies in a Towne. or for  
tresse that no man could come vn-  
to him, or be sent from him with  
letters, whereby his minde, or the  
distresse and inconuenience that  
he is in, might of his friends bee  
vnderstand. Yet his minde being  
written, may of them notwithstanding in the night bee  
read, as farre of as a light can then be seene, and by day,  
as farre as a burning glasse can cast the sunne, or a hat  
or any other such like marke may perfectly be deter-  
ned, so that the order therein be first knowen & agreed  
vpon betwene both parties. The maner in doing it in  
the night, is thus: hee that giueth the aduise, must hold  
his letter in the one hand wherein his minde is redy  
written, and one light or two lightes in the other hand,  
and the other that should reade and copy the same,  
ought to haue paper, and penne and inke with this a b c,  
e t c. here folowing, and vnderstand.

a b c d e f g h i k l	m n o p q r s t v w
this part of letters with 1. light, and this part with two lightes.	
I I I I I I I I I I	2 2 2 2 2 2 2 2 2 2
I 2 3 4 5 6 7 8 9 10 11	I 2 3 4 5 6 7 8 9 10

And for the plainer vnderstanding hereof, it is to bee  
noted that the first part of the letters are shewed with  
one light, and the second part beginning at M, are  
signified with two lightes, and euerie letter of the a b c  
must bee vnderstand, and knowen by the number or  
often shewing and hiding of the light or lightes: As  
for example, if this woorde, Man were to be written,  
because

## Of sending aduise

because M is the first letter standing in the second part,  
M must be signified by two lightes shewed once, and  
then hidden, and staied so long as may bee thought that  
he that doth copie after the light so seuerally shewed,  
and the number diligently marked, may haue conue-  
nient time to write M: then one light being shewed  
once, and so hidde and staied, a must be written: for that  
a is the first letter in the first part: and againe two  
lightes being shewed twice and staied, n, ought to bee  
written, because n is the second letter in the second part:  
which donne, there shalbe written Man. And thus by  
marking well the number of shewing, hyding and stay-  
ing of the light or lightes, the letter that thereby is  
signified, may most easely be vnderstand and  
perceined. So that after this sorte ther  
may be expressed and written what  
so euer a man list.



## To the Reader.



When the Britons the atuncient inhabitants of this Isle (for lacke of skilfull men of warre of their owne, being afraied of the Franki, and Burgundi, which wer certaine Barberous nations, who at the time ouer ranne, spoiled, and possessed Frãce) caused the Germaine people called Angly to come to ayde and defend them, by whose procurement the Angly vnder Vortiger their King, taking vpon the same enterprife, after they had once defended them, did then incontinent driue them out of this Island, remaining here themselves to inhabite: and after their name called it England: euen as also of later daies, the like chaunce happened to the Greekes, by calling in the Turkes to helpe them against their enemies, Which examples, with innumerable like being well considered, do most manifestly shew, how daungerous and pernitiuſ it is for a Prince and his Realme, to be driuen to trust to the seruise of straungers, for lacke of sufficient skilfull men of their owne for their defence. Wherefore sithens my intent in setting foorth this booke of Marciall affaires, hath beene onely to the ende to declare my good will, to haue my naturall countriemen not to be inferiour to any in warlike knowledge, but rather to excell in the same, whereby without ayde or help of any forein nation: we may alwaies be most renowned and famous, I shall beseech all gentle readers, for this my labour done for their commodities, to iudge & report thereof accordingly. And although my doinges herein, be not correspondent to my desire, nor to the satisfaction of euerie mans minde (which were impossible) yet my trust is, that some neuerthelesse by diligēt reading therof, & imitating the exsãple of Lucullus, (who chiefly by study of like bookes, in very shorte space, became one of the valiãtest & worthiest warior of al the Romães) may if they list, take commoditie & profit, wherby the knowledge.

## To the Reader.

ledge in warres, may of such as neuer haue bene trained in them, be the more easily gotten and attained. For which cause, my indeuour and trauaile taken herein, for to profit this our common weale, deserueth not vtterly to be despised, seeing that the most vertuous life, and gouernement of Alexander Seuerus Emperour of Rome, with many other Princes and common weales, could not being negligent in this kind of studie and practise thereof, saue or defend themselves, from most shameful ends, and miserable deaths: wherein fortune was not to bee blamed, but onely their folly and ignorance, for hauing neuer thought in time of tranquillitie and peace, that it could chaunge into aduersitie and trouble: the which is

a common fault of men not to make accompt

in faire weather, of the tempest

to come,



## The table of the additions.



Perfect rule to bring men into a square battell of what number so euer they be. fol. 2.

To know how many men may march in a rancke, and at a suddaine to bring them into a foure square battaille, so that their Ansigne may come to in the midst. 3.

How to ordaine a number of men or an armie into a battaille, like vnto a wedge, or thre square, so that it may be apt to march with the point thereof toward the enemies. 6.

To make the battaille called the sheeres, which in old time they vled to set against the triangle. 7.

What auantage it is to order men in a triangle battaille against the enemy, that knoweth not how to make the battaille called the sheeres to set against it, in especially where there is as many men of the one part as of the other. 8.

To bring a number of men or an armie, into a battaille, which in old time was called a Saw. 9.

To fashion a battaille of a number of men, or an armie like vnto two Triangles ioyned together, so that they may be apt to march with a corner thereof toward the enemies. 10.

What is best to be done where the ordinaunce of the enemies being shotte into the Armie hath slaine many men. 11.

How to chaunge with speede an armie, that is, in battail ray foure square, into a triangle fashion, without disordering the first ranckes, and without perill of confusion. 13.

Of the perfect forme or fashion of strong places. 16.

The strongest and perfectest fashion of all other for building of y<sup>e</sup> cōstin or wall of a towne or fortresse. 18.

An example of the quadzant forme to proue that it causeth



## *The table of the additions.*

Causeth debilitie and weakenesse. 22.

Of the nature of Salt peter, and the maner how to make and refine it. 23.

The maner how to make all sortes of Gunpowder, Fol. 27.

The maner that is vsed of charging and shooting of ordinaunce. 33.

How to get out quickly the nailes that should happen by treason, or otherwise to be dyuen into the touch-holes of ordinaunce. 34.

How much the artillerie ought to be esteemed of the armies now a daies, and whether the same opinion of them which is had vniuersallie be true. 34.

Of Mines, and placing of Powder vnder ground, wherewith inuincible Fortresses, by fire may be ruined, when ordinaunce can not be brought vnto them. 38.

The maner how to make trombes or trunckes of fire, as well to assault as to defende a breach or gate, and to set a fire a Towne or Campe, or any thing else. 39.

How to make bottels or pots of fireworke to throw into shippes, or among men that are in battel ray. Fol. 40.

An other composition of fire worke. 40.

Balles of mettell to throw among men in battel ray or otherwise, which breaking shall do wonderfull hurt. 41.

The maner how to prepare pottes and balles of fire worke to throw with hand. 41.

How to make balles of wilde fire, to shote in ordinaunce, or to throw with handes. 42.

To trimme Targaettes with fireworke to assault, or to defend a breach. 43.

To make an other kind of fireworke. 43.

## *The table of the additions.*

How to make a mixture in stone that shal kandel fire  
with water or spittell. 43.

How to make an other kind of stone, to kandel fire wit  
water or spittell. 44.

How to make lutum Sapientia. 44.

How to make certaine fireworke, to tye at the  
pointes of pikes or boylemenstaues. 45.

How to make diuers compositions of fire workes:

How to make a girdell for shouldours, or ffishers,  
whereby they may goe in the water and passe ouer a ri-  
uer without either bridge or bote. 48.

How to write, and cause the same that is writtten  
to be read a farre of; without sending any message. 48.

Fol.

The end.

THE NEW TABLES

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*¶ Most*  
BRIEFE TABLES  
to knowv redily howv ma-  
*nie ranckes of footemen armed*  
with Corslettes, as vnarmed, go  
to the making of a iust battaile,  
from an hundred vnto twen-  
tie thousand.

NEXT A VERY EASIE, AND AP-  
proued way to arme a battaile with Harkabu-  
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NEWLIE INCREASED, AND LARGELIE  
amplified both in the tables, as in the declarations of the  
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GIROLAMO CATANEO NOVARESE.

Tourned out of Italian into English by H.G.



*¶ Imprinted at London, by*  
Thomas East: for Iohn Wight.  
1588.

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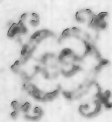
nier ranks of footmen armed  
with Corsiers as unarmed go  
to the making of a full battle,  
from an hundred into two  
thousand.

NEXT A VERY EASIE, AND AP-  
proved way to name a battle with Harkadon-  
xer, and wings of footmen according  
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To the right Honorable his  
singuler good Lord, the Earle  
*Aloigi Anogardo.*

**I**T is the common opinion of all  
worthie men, that among things  
that preserue a man still in life,  
warfare is that one, before the  
which none other is to haue  
place. And that because who-  
souer behaueth himselfe hono-  
rable in the exercise thereof,  
representeth nothing more, then  
the true Image of the most great and omnipotent  
God: Because among the most high titles attributed  
(according to his will) to his deuine Maiestie in the  
old and holie law, he hath alwayes bene content to be  
reuerenced and called by the name of the God of hostes.  
Whereupon it is come to passe, that for a good and de-  
uine example for vs, there hath hetherto benealwaies  
granted and offered by the whole world vnto this most  
noble warfare, profession, great rewardes, high honours,  
and innumerable praises: Whereof such store of testi-  
monies, are to bee seene in your most honorable and  
auncient house, as it is superfluous (me thinketh) to tell,  
how Emperours, and great Kinges haue rewarded the  
worthinesse and loyalty thereof with no meane degree  
and Signorie. The which worthinesse and loyalty, shi-  
ning as it were through a certaine proprietie of lōg space  
in your father, and graundfathers: as the same hath at  
other times beene by prooffe wel knownen, and honorably  
rewarded, by that most prudent Senate of Venice, so are  
they now by worthie succession and common consent

## The Epistle.

in such sort daily approoued, and praised in you, as among the faithfull and deere friends thereof you are reputed and kept for a great Captaine, a louing child, brother, and champion. VWhich is the cause that (I studying to profit with these my trauailes, such as they are, each one that is delighted with this most noble kinde of exercise) could not deuise a person in this citie, to whom (for his rare vertue, and my bounden durie) I might better dedicate and consecrate them, then to your Lordship. And thus I shall arme them with a iust defence against those that are of a malicious minde, and like a good seruaunt of yours, that in reuerensing and following you, giueth place to none, do pray you the rather to take this patronship vpon you, as in deedes of humanitie and noblenesse of minde, I know neuer a

Lord at this day, that may take this prise

from you. To whose good fauour I

doe most reuerently recommend

mee. From Brescia the

5. day of Iulie,

1563.

**YOVR LORDSHIPS MOST**

**humble seruant Girolamo, Cda-**

**neo Nonarese.**

¶ *Girolamo Cataneo,*  
to the gentle Reader.



*To know how to determine vpon  
a sodaine, sitteth well to euerie one  
that hath anie doinges, and that in  
the handeling thereof, hath there-  
by gotten great honour and commo-  
ditie: so is it (according to the iudge-  
ment of the wise) of greatest im-  
portance to an host, that is in the  
field out of araiie. Because it often  
happeneth, that hauing needs sometimes to fight vpon small  
warning, it is with a lesse number of people assaulted, put out  
of order and ouerthrowen. Wherefore I haue taken vpon me,  
being desirous to helpe at so great a needs, to shew brieflie  
the waie how it may quicklie be brought into a maine bat-  
taile, and how readilie to arme the said battaile as well with  
Corsets, as harkabusers, and horsemen. To the ende that  
euerie meane witte, may vnderstand all that, which I, by the  
space of thirtie yeares and more, haue obserued from wise cap-  
taines, preoued by experience in person, and learned aswel by  
the warres, as by the Mathematicall disciplines. Whereby  
ech one may know how at needs, valiantlie to resist the  
vnset of the enemy, and that for the most times,  
not so much by force, as  
by policie.*

*A.iii.*





1. *Quadratus* *quadratus*  
 2. *Quadratus* *quadratus*

The first of these is the fact that the  
 world is not a uniform surface. It is  
 divided into two great parts, the  
 land and the water. The land is  
 divided into continents and islands.  
 The water is divided into oceans and  
 seas. The continents are the great  
 masses of land which are separated  
 from each other by oceans or seas.  
 The islands are small pieces of land  
 which are surrounded by water.  
 The oceans are the great bodies of  
 water which cover most of the earth's  
 surface. The seas are smaller bodies  
 of water which are usually connected  
 to the oceans.



## A declaration of the squares

of a battaile.



Because it were too long a worke,  
for those y are ignorant how to  
make y reconing to set a battail,  
of men armed w Corlets, as vn-  
armed, according to the custome  
observed at these daies, I haue  
found out certaine brieve & easie  
tables folowing: Whereby may  
evidently be seene (the whole nu-  
ber of y armed and vnarmed, being once knowen) how  
long & broad it ought to be, beginning from an hundred  
vnto twentie thousand. For it is almost an impossible  
thing, though a battaile were verie great, that it should  
mount vnto this number, for that at these dayes the  
maner is not, to set a battaile of more than of ten or  
of twelue thousand men. And ye shal vnderstand further,  
how it is needfull that a battaile well appointed, both  
for the fight and march, that it be square of ground and  
not of people: or else two fold in respect of the ranks,  
that are taken from the head and taile of the battaile,  
to arme the two flankes, as by our example shall be  
declared. When the ground that this battaile doth oc-  
cupie is square, it cometh to passe that there are not  
so many men in length, as are in breadth. Of a square  
battaile or number of people, and not of ground, as is  
seene in the 5. 6. and 7. Columnne of our tables: and  
of this battaile, it is necessarie to speake a few wordes:  
To wit, this battaile is square of number of people, &  
not of ground, that is, there are so many men in length,  
as in breadth. But through the distaunce which is  
needfull to be had, betwene footmen and footmen, from  
West to Backe, let for the march and for the fight,  
it cometh to be more long then broad of ground. Or

else

## *Of the square battailes:*

Marbrato.

Disaborare.

Straagante.

else it is square of number of people, and consequent of ground. As when there are so many men in length, as are in breadth. True it is that this kind of order is not meet to fight, because such a square can not be solid, but that for the most times, all the pikes bee at stand, and upright. Letting you to wit, that it mought for all that come to passe, that the pikes should fall from their stand, and the battaile remaine in like sort square of ground as of people. At what time it should happen for a verie strange thing, that the battaile whilest it were with the pikes at stand, should be assaulted on all foure partes and being willing to bend their pikes for their defence, in that case, some few of them abiding fast in the Center of the battaile, and all the others round about being enlarged proportionallie, the battaile should yet remaine square of people & of ground except the angles, which should come to bee opened. And this is the reason that y<sup>e</sup> pikes, which are at stand, are not meet to fight, because in so being each footman hath not 7. fote space in length, that is 3. before, and 3. behinde, and one for his person, the which space is needfull to be appointed out, to each footman in the aforesaid battailes. Besides that, it is also to be knowen how according to y<sup>e</sup> good deuision, that our auncients do make, which is both praised & obserued by y<sup>e</sup> wise Captains of this our time, it is needfull for the hauing of the abovesaid squares of a battaile, that euery footman haue in breadth, from shoulder to shoulder, 3. fote in this sort, to wit, that there be 2. fote betwene one footman & another, so that euerie one doth occupie one fote for his person, & one other that he is to haue on each side him, which is three in breadth for each one of them. And although a battaile in fight doth ware more narrow, as wel in length as in breadth, the one setting his foot in the mid spale of the other: It yet remaineth not for all this, but that the abovesaid battaile is also square of ground.



## A declaration of the Columnes

of the tables following.

The first numbers placed in the first Columnne, do signifie the footmen armed, with Copesettes, as vnarmed, or vnarmed pikes.

The second numbers, in the second Columnne, do signifie so many footmen in a rancke, as is required that the footmen of the first Columnne do goe in arais.

The third numbers in the third Columnne, do signifie so many ranckes, as the footmen of the first Columnne do goe in arais.

The fourth number in the fourth Columnne, do signifie, the footmen that do errede, the arais being made.

The fift numbers in the fift Columnne, do signifie, so many maniples or partes, the rate is to be made into, so that doubling them, shoulder to shoulder, it may make a square battaile of number of people.

The sixt numbers, in the sixt Columnne, do signifie so many footmen in a rancke, as shall be set to the shoulder of the maniples, and these ranckes are made of those ranckes that did errede in the last of the rate, because they are not one entier maniple, and this is done for to perfoyme an entier battaile of number of people.

The seuenth numbers, in the seuenth Columnne, do signifie the number of people in length, and breadth of a battaile, that is, the first number doth signifie the people in length, and the second the people in breadth of that battaile.

The eight numbers, in the eight Columnne do signifie the footmen that do errede out of a square battaile of number of people.

The ninth numbers, in the ninth Columnne, do signifie so many maniples, or partes, as the arais of the footmen, of the first Columnne is to be made into, so that doubling the one maniple to the other, from shoulder to shoulder, they do make a square battaile of ground.

The tenth numbers, in the tenth Columnne, do signifie

## Declara. of the Columnes

so many footmen in a rancke, as is to be set to the shoulder of the maniples, and these ranckes are made of those ranckes that do errede in the last of the raie, because those ranckes do not make an entier maniple, for to be able to performe a square battaile of ground: so these ranckes that are to be set to the shoulder of the maniples, are made of fewer men in a rancke, to the end they may make the length equal to that of y maniples, for to be able to performe the same battaile square of ground. And this battaile commeth to be two times and a third more broade then long, as expert warriors, both auncient & moderne will haue it. And this manner of battaile is square of ground, that is as long as broad.

The eleuenth numbers in the eleuenth Columnne, do signifie so many men in length and breadth as are in a square battaile of ground, that is to say, the first number is the length, and the second the breadth.

The twelue numbers, in the twelfth Columnne, do signifie the excelle of the footmen, of a square battaile of ground.

The thirteenth numbers, in the thirteenth Columnne, do signifie so many maniples or partes as the arate ought to be made into, for to make a twofold battaile.

The fourteenth numbers, in the fourteenth Columnne, do signifie so many footmen in a rancke, as is to be set to the shoulder of the maniples, and these ranckes are made of those ranckes, that do errede in the last of the raie, because they do not make one entier maniple to y length of the others. And these ranckes that are made, of fewer men in a rancke, to the end they may be equal in length to the maniples, to be able to ioyne shoulder with those maniples, to performe a two fold battaile, that is, that the breadth be of two times so many men as the length.

The fiftenth numbers in the fiftenth Columnne, do signifie the length and breadth of a square two folde battaile,

## *Declara. of the Columnes.*

battaile, the first, number at the length, and the second the breadth.

The sixteenth number in the sixteenth Colunne, do signifie so many footemen as doe excede in a square two fold battaile.

We haue alreby spoken of a square battaile, of number of people, of ground, & two folde, next, it shalbe brieuely declared, although in the beginning of this treatise, there is inough saide. A square battaile of number of people, is when there are so many men in length, as in breadth, & this battaile, the autho<sup>r</sup> understandeth, not to be square of ground, according to the distaunce that men will haue in length & breadth, in their march and fight, abiding still in battaile, because being square in number of people, and those footemen hauing their due distaunce, and seuen fote in length, and thre in breadth, as is aboue saide, the battaile would be two times, and a third, moze long then broade of ground. So as this number of battaile cannot be called a square battaile of ground. Because a battaile square of ground, is two times and a third moze broade then long of men, and this maner of battaile, hauing the due distance as is aboue saide, may be very well called a square battaile of ground, because this battaile doth take as much ground in length as in breadth. And a square two fold battaile, is two times moze broad, then long, for taking away of the armed rankes from the head & taile thereof, to arme the two flankes of y battaile, it wilbe til y selfe same in length & breadth of men, as is y square battaile of ground, and for this cause it may also be called a square battaile of ground. And for y this sort of battaile is moze in vse the<sup>n</sup> y others, by reason of the vnarmed pikes, I haue therof set for the many examples, as in this worke is to be scene. And if it seme good vnto you, to make your battailes of any other propoztion, you shal find the whole in the ende of this worke: With other good aduertisements how to incampe.



# Declaræ. of the Columns.

battalies, the first, number at the length and the second  
 the breadth.  
 The last number in the first column, 20  
 signifies to many battalies as are contained in a square of 20  
 solo battalies.  
 We have already spoken of a square battalie, of num-  
 ber of people, of ground, & two solo battalies, it shall be called  
 is declared, although in the beginning of this treatise,  
 there is enough said. A square battalie of number of  
 people, is such there are to many men in length, as in  
 breadth, & this battalie, the most convenient, not to  
 be square of ground, according to the distance that men  
 will have in length & breadth in their march and fight,  
 adding still in battalies, breadth being square in number  
 of people, and those battalies having their own distance,  
 and their own in length, and then in breadth, as is above  
 said, the battalie would be two times, and a little more  
 long then broad of ground, so as the number of bat-  
 talies cannot be called a square battalie of ground. The  
 cause a battalie square of ground, is two times and a  
 third more broad then long of men, and this manner of  
 battalie, having the one distance as is above said, may  
 be very well called a square battalie of ground, because  
 the battalie hath as much ground in length as in  
 breadth. And a square two solo battalie, is two times  
 more broad then long, for taking away of the second  
 rank from the head & tail thereof, to arrive the two  
 ranks of 6 battalies, it will be 6 less than in length  
 & breadth of men, as is square battalie of ground, and  
 for this cause it may also be called a square battalie of  
 ground. And for this sort of battalie, I have the  
 & others, by reason of the distance which I have the  
 set for the many examples, as in this book is to be  
 seen. And if it seems good unto you, to make your  
 tables of any other proposition, you shall find the use of  
 the use of this book: With other good accounts  
 written both to instruct.

i ii iii iiii v vi vii viii ix x xi xii xiii xiiii xv xvi

	3	33	1	3	1	10		5	1	6		4	2	7	
100	5	20	0	2	0		0	3	1			2	4		2
	7	14	2	1	3	10		2	2	16		4	0	14	
	9	11	1	1	1			1	7			1	5		
	3	50	0	4	0			6	0	8		6	0	8	
150	5	30	0	2	2	12	6	3	3			3	3		6
	7	21	3	1	5	12		2	4	18	6	2	4	18	
	9	16	6	1	3			2	0			2	0		
	3	66	2	4	2	14		7	1			6	2	10	
200	5	40	0	2	4		4	4	2		2	4	0		0
	7	28	4	2	0	14		3	1	22		2	6	20	
	9	22	2	1	5			2	4			2	2		
	3	83	1	5	1			8	1	10		7	1	11	
250	5	50	0	3	1	15	10	5	0		0	4	2		8
	7	35	5	2	2	16		3	4	25		3	1	22	
	9	27	7	1	7			2	7			2	4		
	3	100	0	5	2			9	0	11		8	1	12	
300	5	60	0	3	2	17		5	2			5	0		0
	7	42	6	2	3	17	11	3	6	27	3	3	4	25	
	9	33	3	1	8			3	0			2	7		
	3	116	2	6	1			9	2	12		8	2	13	
350	5	70	0	3	4	18	8	5	4		2	5	1		12
	7	50	0	2	5			4	1	29		3	5	26	
	9	38	8	2	1	19		3	2			2	8		
	3	133	1	6	2			10	0	13		9	1	14	
400	5	80	0	4	0	20		6	0		10	5	3		8
	7	57	1	2	6	20	0	4	2	30		4	0	28	
	9	44	4	2	2			3	3			3	1		
	3	150	0	7	0	21		10	2			10	0	15	
450	5	90	0	4	1		9	6	2	14		6	0		0
	7	64	2	3	9	21		4	4	32	2	4	2	30	
	9	50	0	2	3			3	5			3	3		

ix x xii xiii xiv xv xvi

	3	166	2	7	1	11		11	2	14		10	14	16
500	5	100	0	4	21	22	16	7	0	35	10	4	3	4
	7	71	3	3	10	22		5	0	35		3	4	31
	9	55	5	2	4			3	8			3	4	
	3	183	1	7	2			12	0	15		6	4	16
550	5	110	0	4	3	23	21	7	12		10	4	6	8
	7	98	4	3	2	23		5	1	36		3	7	34
	9	61	1	2	5	23		4	0			11	2	
	3	200	0	8	1	24		12	1	16		7	0	17
600	5	120	0	5	0	24	0	7	2		8	5	0	5
	7	85	5	3	4	25		5	2			3	8	35
	9	66	6	2	7	25		4	1	37		12	0	
	3	216	2	8	2	25		12	2	17		7	1	18
650	5	130	0	5	1	25	0	7	3		4	5	1	2
	7	92	6	3	5	26		5	3	38		4	0	36
	9	72	2	2	8	26		4	2			12	2	
	3	233	1	8	2	26		13	2	17		7	3	18
700	5	140	0	5	1	26	24	8	1		3	5	3	16
	7	100	0	3	5	26		5	6	41		4	2	38
	9	77	7	2	8			4	5			13	0	
	3	250	0	9	0	27		13	2	18		7	4	19
750	5	150	0	5	2	27	21	8	1		12	5	4	9
	7	107	1	3	6	27		5	6	41		4	3	39
	9	83	3	3	0	27		4	5			13	1	
	3	266	2	9	1	28		14	2	18		8	0	20
800	5	160	0	5	3	28	16	8	4		8	5	5	40
	7	114	2	4	0	28		6	2			4	4	
	9	88	8	3	1	28		4	8	44		14	0	20
	3	283	1	9	2	29		14	2	19		8	2	
850	5	170	0	5	4	29	9	8	4		14	6	2	10
	7	121	3	4	1	29		6	2	44		4	6	42
	9	94	4	3	2			4	6					



i ii iii iv v vi vii viii ix x xi xii xiii xiiii xv xvi

	3	300	0	10	0	30		15	0	20		14	0	21	
600	5	180	0	6	0	30	0	9	0	20	0	8	2	18	
	7	128	4	4	2	30		6	3	45		6	0	42	
	9	100	0	3	3	30		5	0			4	6		
	3	316	2	10	1	30		15	2	20		14	1	22	
950	5	190	0	6	1	30	20	9	2		10	8	3	4	
	7	135	5	4	3	31		6		47		6	1	43	
	9	105	5	3	4	31		5	2			4	7		
	3	333	1	10	2	31	8	16	2	20		15	0	22	
1000	5	200	0	6	2	31		10	0		0	9	0		
	7	142	6	4	4	32		7	1	50		6	3	45	
	9	111	1	3	5	32		5	5			5	0		
	3	366	2	11	0	33		16	2	22		15	2	23	
1100	5	220	0	6	3	33	11	10	0		0	9	2	19	
	7	157	1	4	5	33		7	1	50		6	5	47	
	9	122	2	3	6	33		5	5			5	2		
	5	240	0	7	0	34		10	2	23		9	3	25	
1200	7	171	3	5	0	34	10	17	3		4	6	6		
	9	133	3	3	8	35		5	7	52		5	3	48	
	11	108	4	3	2			4	8			4	4		
	5	260	0	3	1	36		11	1	23		10	0	26	
1300	7	185	5	5	1	36	4	8	0		12	7	1		
	9	144	4	4	0	36		6	2	56		5	5	50	
	11	118	2	3	8			5	1			4	6		
	5	280	0	7	2	37		11	2	24		10	3	26	
1400	7	200	0	5	2	37	31	8	2		8	7	4	22	
	9	155	5	4	1	37		6	4	58		5	8		
	11	127	3	3	4	37		5	3			4	9	53	
	5	300	0	7	4	38		12	0	25		11	0	27	
1500	7	211	3	5	4	38	18	3	4		0	7	6	15	
	9	166	6	4	3	39		6	6	60		6	1		
	11	126	4	3	6	39		5	5			5	0	55	

i ii iii iii v vi vii viii ix x xi xii xiii xiiii xv xvi

	i	ii	iii	iiii	v	vi	vii	viii	ix	x	xi	xii	xiii	xiiii	xv	xvi
1600	5	320	0	8	0		40		12	1	26	11	2		28	
	7	228	4	7	5			0	8	5		18	1			
	9	177	7	4	4	40			6	7	61	14	6	3	57	4
	11	145	5	3	7				5	6			5	2		
	5	340	0	8	1	41			12	2			11	3	29	
	7	242	6	5	6				8	6	27		8	2		
1700	9	188	8	4	5	41	19		6	8		26	6	4	58	18
	11	154	6	3	8				5	7	62		5	3		
	5	360	0	8	2	42			12	4			12	0	30	
	7	257	1	6	0		36		9	1	28		8	4		
1800	9	200	0	4	6	42			7	1	64		6	6	60	0
	11	163	7	3	9				5	9			5	5		
	5	380	0	8	4	43			13	2			12	1	31	
	7	271	3	6	2		8		9	4	28		8	5		9
1900	9	211	1	4	8	44			7	4	67	24	6	3	61	
	11	172	8	4	0				6	1			5	6		
	5	400	0	9	0	44			13	3			12	4		
	7	285	5	6	3		20		9	5	29		9	1	31	
2000	9	222	2	5	0	45			7	5	68	28	7	1		16
	11	181	9	4	1				6	2			5	9	64	
	5	420	0	9	1	45			14	0			13	0		
	7	300	0	6	4		30		10	0	30		9	2	32	
2100	9	233	3	5	1	46			7	7		0	7	2		20
	11	190	10	4	2				6	4	70		5	10	65	
	5	440	0	9	2	46			14	3			13	1		
	7	314	2	6	5		38		10	3	30		9	3	33	
2200	9	244	4	5	2	47			8	1		10	7	3	66	22
	11	200	0	4	3				6	7	73		6	0		
	5	460	0	9	3	47			14	4			13	2		
	7	328	4	6	6		44		10	4	31		9	4	34	22
2300	9	255	5	5	3	48			8	2		6	7	1	67	
	11	209	1	4	4				6	8	74		6	1		

i ii iii y vi x vii viii ix x xxi xii xiii xiiii xv xvi

	5	480	0	10	0		15	0		14	0	
1400	7	342	6	7	1	48	10	5	32	10	0	34
	9	266	6	5	5	50	8	3	75	7	7	70
	11	218	2	4	6		6	9		6	4	
2500	5	500	0	10	0	50	15	3	32	14	1	35
	7	357	1	7	1		11	1		10	1	71
	9	277	7	5	5	50	8	6	78	7	8	
	11	227	3	4	6		7	1		6	5	
2600	5	520	0	10	2	50	15	3	33	14	2	36
	7	371	3	7	3		11	1		10	2	72
	9	288	8	5	7	52	8	6	78	7	6	
	11	236	4	4	8		7	1		6	6	
2700	5	504	0	10	2	51	15	4	34	15	0	36
	7	385	5	7	3	48	11	2		10	5	75
	9	300	0	5	7	52	8	7	79	14	8	
	11	245	5	4	8		7	2		8	9	
2800	5	560	0	10	3	52	16	0	35	15	6	37
	7	400	0	7	4	44	11	3	80	10	3	75
	9	311	1	5	8	53	8	8		8	7	
	11	254	6	4	9		7	3		6	9	
2900	5	380	0	10	4	53	16	2	35	15	1	38
	7	414	2	7	5	38	1	5	82	10	0	76
	9	322	2	6	0	54	9	1		8	4	
	11	263	7	4	10		7	5		6	0	
3000	5	600	0	11	0	54	16	3	36	15	7	38
	7	428	4	7	6	30	11	6		11	1	78
	9	333	3	6	1	55	9	2	83	8	9	
	11	272	8	5	0		7	6		7	1	
3100	5	620	0	11	1	55	17	1	36	15	4	39
	7	442	6	8	0	20	12	2		11	2	79
	9	344	4	6	2	56	9	5	86	4	8	
	11	281	9	5	1		7	9		2	2	



i ii iii iv v vi x vii viii ix x xi xii xiii xiiii xv xvi  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3200	5	640	0	11	2	21	17	16	37	0	16	0	40	9
07	7	457	1	8	1	56	12	21	37	18	11	3	80	
	9	355	5	6	3	8	9	5	86	7	8	8		
	11	290	10	5	2	57	7	2		7	3	1		
	1	660	0	11	2	57	17	4	37	0	16	2	40	
3300	7	471	3	8	1	57	12	5	7	7	5	1	82	26
	9	366	6	5	3	8	9	8	89	7	5	1		
17	11	300	0	5	2	57	8	6		7	5	1		
	1	680	0	1	3	58	17	4	38	0	16	3	41	
3400	7	485	5	8	2	58	12	5	38	7	5	1	82	38
	9	377	7	6	4	85	9	8	89	7	5	1		
57	11	309	1	5	3	5	8	8		7	5	1		
	1	700	0	11	4	59	18	2	38	0	16	3	42	
3500	7	500	0	8	3	59	13	1	38	7	5	1	83	44
	9	388	8	6	5	59	0	2	91	7	5	1		
77	11	318	2	5	4	59	8	4		7	5	1		
	1	720	0	12	0	60	18	2	39	0	17	0	42	
3600	7	514	2	8	4	60	13	1	39	12	12	1	85	30
	9	400	0	6	6	60	10	2	92	1	9	1		
77	11	327	3	5	5	60	8	4		7	5	1		
	1	740	0	12	1	60	18	2	40	0	17	1	43	
3700	7	528	4	9	5	61	13	1	40	12	12	2	86	2
	9	411	1	6	7	61	0	2	92	7	9	9		
87	11	336	4	5	6	61	8	4		7	5	1		
	1	760	0	12	2	61	19	0	40	0	17	3	43	
3800	7	542	6	8	6	61	13	4	40	12	12	4	88	16
	9	422	2	6	8	62	10	5	95	0	9	7		
87	11	345	5	5	7	62	8	7		8	8	0		
	1	780	0	12	2	62	19	9	41	0	17	3	44	
3900	7	557	1	8	6	62	13	4	41	12	12	4	88	28
	9	433	3	5	8	62	10	5	95	5	9	7		
87	11	354	6	5	7	62	8	7		8	8	0		

ix x ii iii iv v vi vii viii ix x xi xii xiii xiv xv xvi

	5	800	0	12	31	63		19	2	41	18	0	44	
4000	7	571	3	9	0	21	31	13	6	13	12	6	00	40
	9	444	4	7	0	63		10	7	97	10	0	90	
	11	363	7	5	8			8	9		8	2		
	5	820	0	12	4	64		19	2	42	18	1	45	
4100	7	585	5	9	11	21	04	13	6	26	12	7	00	4
	9	455	5	7	1	64		10	7	97	10	1	91	
	11	372	8	5	9			8	9		8	3		
	5	840	0	13	0	64		20	0	42	18	1	46	
4200	7	600	0	9	2	21		14	2	01	13	0	00	14
	9	466	6	7	2	65	40	11	1	100	10	1	91	
	11	381	9	5	10			9	1		8	3		
	5	860	0	13	10	65		20	0	41	18	3	46	
4300	7	614	2	9	3	21	10	14	2	43	13	2	00	22
	9	477	7	7	3	66		11	1	100	10	3	93	
	11	390	10	6	00	01		9	1		8	5		
	5	880	0	13	10	66		20	2	41	18	3	47	
4400	7	628	4	9	3	21	44	14	4	43	13	2	00	29
	9	488	8	7	3	66		11	3	102	10	3	93	
	11	400	0	6	00	01		9	3		8	5		
	5	900	0	13	2	67		20	2	41	19	0	47	
4500	7	642	6	9	4	01	11	14	4	01	13	4	00	35
	9	500	0	7	4	67	11	11	3	8	10	5	95	
	11	409	1	6	1	01		9	3	102	8	7		
	5	920	0	13	3	67		20	4	41	19	0	48	
4600	7	657	1	9	5	01		14	6	44	13	4	00	40
	9	511	1	7	5	61	44	11	5	8	10	5	95	
	11	418	2	6	2	68		9	5	104	8	7		
	5	940	0	13	4	68		20	4	45	19	2	48	
4700	7	671	3	9	6	01	48	14	6	45	13	6	00	44
	9	522	2	7	6	69		11	5	8	10	7	97	
	11	427	3	6	3	01		9	5	104	8	9		

	i	ii	iii	iiii	v	vi	vii	viii	ix	x	xi	xii	xiii	xiiii	xv	xvi
	5	960	0	13	4	69		21	15	10	45	19	2	49		
4800	7	685	5	9	6	69	39	15	11	7	106	13	6	47		
oe	9	533	3	7	6	69		11	7			10	7	97		
	11	436	4	6	3			9	7			8	9			
	5	980	0	14	0	70		21	11		46	19	3	50		
4900	7	700	0	10	0	70	40	15	11			14	0	98	0	
ie	9	544	4	7	7	70		11	7		106	10	8			
	11	445	5	6	4			9	7			8	10			
	5	1000	0	14	1	70		21	3		46	14	2	50	0	
5000	7	714	1	10	1	70	30	15	3			11	1	100		
ie	9	555	5	7	8	71		12	0		108	9	1			
	11	454	6	6	5			9	9			20	0			
	5	1020	0	14	1	71		22	0		46	14	2	51		
5100	7	728	4	10	1	71	59	15	5			11	1	100	0	
oe	9	566	6	7	8	71		12	2		110	9	1			
	11	463	7	6	5			10	0			20	10			
	5	1040	0	14	2	72		22	0		47	14	3	51		
5200	7	742	6	10	2	72	16	15	5			11	2	49		
oe	9	577	7	8	0	72		12	2		110	9	2	01		
	11	472	8	6	6			10	0			20	3			
	5	1060	0	14	3	72		22	2		47	14	5	51		
5300	7	757	1	10	3	72	44	16	0			11	4	47		
oe	9	588	8	8	1	73		12	4		112	9	4	03		
	11	481	9	6	7			10	2			20	3			
	5	1080	0	14	3	73		22	3		48	14	5	52		
5400	7	771	3	10	3	73	71	16	0			11	4	44		
oe	9	600	0	8	1	73		12	4		112	9	4	103		
	11	490	10	6	7			10	2			21	0			
	5	1100	0	14	4	74		22	4		48	14	0	52		
5500	7	785	5	10	4	74	24	16	2			11	0	40		
oe	9	611	1	8	2	74		12	6		114	9	6	105		
	11	500	0	6	8			10	4			0	6			



5600	5	1120	0	15	0	74	0	22	4	0	0	21	0	53	
	7	800	0	10	5	74	50	16	2	49	14	13	0	53	35
	9	622	2	8	3	75		12	8	8	11	11	6	105	
	11	509	1	6	9	75		10	4	114	9	6			
5700	5	1140	0	15	1	75		23	1	0	0	21	2		
	7	814	2	10	6	75	0	16	4	49	16	13	2	53	29
	9	633	3	8	4	76	0	12	8	116	11	8			
	11	518	2	6	10	76		10	6	116	0	8	1	107	
5800	5	1160	0	15	1	76		23	1	0	0	21	2		
	7	828	4	10	6	76		16	4	50	13	2	54	22	
	9	644	4	8	4	76	24	12	8	0	11	8			
	11	527	3	6	10	76		10	4	116	0	8	1	107	
5900	5	1180	0	15	2	76		23	3	0	0	21	4		
	7	842	6	11	0	76	48	16	6	150	15	4	54	14	
	9	655	5	8	5	77		13	1	0	12	1	109		
	11	536	4	7	0	77		10	8	118	9	10			
6000	5	1200	0	15	2	77		24	0	0	0	21	4		
	7	857	1	11	0	77	71	17	1	150	15	4	55	5	
	9	666	6	8	5	77		13	3	0	12	1	109		
	11	545	5	7	0	77		10	10	120	9	10			
6100	5	1220	0	15	3	78		23	4	0	0	22	6		
	7	871	3	11	1	78	16	17	0	151	15	5	55	50	
	9	677	7	8	6	78		13	2	0	12	2	110		
	11	554	6	7	1	78		10	9	119	10	0			
6200	5	1240	0	15	4	78		24	1	0	0	22	2		
	7	885	5	11	2	78	38	17	2	151	16	0	55	40	
	9	688	8	8	7	79		13	4	0	12	4	112		
	11	563	7	7	2	79		11	0	121	10	2			
6300	5	1260	0	15	4	79		24	1	0	0	22	2		
	7	900	0	11	2	79	59	17	2	52	16	0	56	28	
	9	700	9	8	7	79		13	4	0	12	4	112		
	11	572	8	7	1	79		11	0	121	10	2			

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6400	50	1280	0	16	0	80	24	3	57	22	4	56	
	7	944	2	11	3	80	17	4	123	16	2	114	16
	9	711	1	8	8	80	13	6	123	12	6	114	
	11	581	9	7	3	80	11	2		10	4		
6500	5	1300	0	16	1	80	25	0	52	22	4	57	
	7	928	4	11	4	80	17	6	125	16	2	114	2
	9	722	2	9	0	81	13	8	125	12	6	114	
	11	590	10	7	4	81	11	4		10	4		
6600	5	1340	0	16	1	81	24	4	53	23	0	57	
	7	942	6	11	4	81	17	5	124	16	3	115	15
	9	733	3	9	0	81	13	7	124	12	7	115	
	11	600	0	17	4	81	11	3		10	5		
6700	5	1340	0	16	2	81	25	1	53	23	0	58	
	7	957	1	11	5	81	18	0	126	16	3	115	30
	9	744	4	9	1	82	14	0	126	12	7	115	
	11	609	1	17	5	82	12	5		10	5		
6800	5	1350	0	16	2	82	25	0	54	23	2	58	
	7	971	3	11	5	82	17	6	125	16	5	117	14
	9	755	5	9	1	82	13	8	125	13	0	117	
	11	618	2	7	5	82	11	4		10	7		
6900	5	1380	0	16	3	83	25	2	54	23	3	58	
	7	985	5	11	6	83	18	1	127	16	6	118	56
	9	766	6	9	2	83	14	1	127	13	1	118	
	11	627	3	7	6	83	11	6		10	8		
7000	5	1400	0	16	4	83	25	2	55	23	3	59	
	7	1000	0	12	0	83	18	1	127	16	6	118	38
	9	777	7	9	3	84	14	1	127	13	1	118	
	11	636	4	7	7	84	11	6		10	8		
7100	5	1420	0	16	4	84	25	4	55	24	0	59	
	7	1014	2	12	0	84	18	3	129	17	1	120	20
	9	788	8	9	3	84	14	3	129	13	3	120	
	11	645	1	7	7	84	11	8		10	10		

7200	5	1440	0	17	0	84	60	26	0	51	0	24	0	60	
	7	1028	4	12	1	84		18	4	55	30	17	1	00	08
	9	800	0	2	4	85		14	4	130	8	13	3	120	
	11	654	6	7	8	85		17	9	8		10	0		
7300	5	1450	0	17	0	85	75	26	0	51	0	24	0	60	
	7	143	6	12	14	85		18	4	51	20	17	2	00	40
	9	811	1	9	4	85		14	4	130	0	13	4	121	
	11	663	7	7	8	85		17	9	2		12	0		
7400	5	1480	0	17	1	86	4	26	2	56	0	24	4	61	
	7	1057	1	12	2	86		18	6	51	8	17	2	00	15
	9	822	2	9	5	86		14	6	132		13	4	121	
	11	672	8	7	9	86		17	0	2		11	0		
7500	5	1500	0	17	2	86	18	26	3	56	0	24	2	61	
	7	1071	3	12	3	86		19	0	51	5	17	3	00	58
	9	833	3	9	6	87		14	7	133		13	5	122	
	11	681	9	7	10	87		12	2	8		11	1		
7600	5	1520	0	17	2	87	31	26	3	57	0	24	4	61	
	7	1085	5	12	3	87		19	0	57	19	17	5	00	36
	9	844	4	9	6	87		14	7	133		13	7	124	
	11	690	10	7	10	87		12	1	2		11	3		
7700	5	1540	0	17	3	87	44	27	0	57	0	24	4	62	
	7	1100	0	12	4	87		19	2	57	5	17	5	00	12
	9	855	5	9	7	88		15	0	135		13	7	124	
	11	700	0	8	6	88		12	3	2		11	3		
7800	5	1560	0	17	3	88	56	27	2	57	0	24	0	62	
	7	1114	2	12	4	88		19	4	57	11	17	6	00	50
	9	866	6	9	7	88		15	2	137		13	8	125	
	11	709	1	8	0	88		12	5	2		11	4		
7900	5	1580	0	17	4	88	68	27	1	58	0	24	0	63	
	7	1128	4	12	5	88		19	3	58	12	17	6	00	25
	9	877	7	9	8	89		15	1	136		13	8	125	
	11	718	2	4	1	89		12	4	2		11	4		



I II III IV V VI VII VIII IX X XI XII XIII XIV XV XVI																					
8000	5	1600	0	17	4	0	89		27	2	58	7	3	12	0	63					
	7	1142	6	12	5			79	19	4	54	14	0		00	52					
	9	888	8	9	8		89		15	2	173					126					
8100	11	727	3	8	1				12	5											
	5	1620	0	18	0		99		27	2	51	0	0	28	3	63					
	7	1157	1	12	6			0	19	4	59			18	2	00	36				
8200	9	900	0	10	0		90		15	2	137			17	14	2	128				
	11	736	4	8	2				12	5				31	7						
	5	1640	0	18	0		90		27	3	59			24	3	64					
8300	7	1271	3	13	0			10	19	5	58	14	2			00	8				
	9	911	1	10	1		91		15	3	138			19	7	128					
	11	745	5	8	3				12	6											
8400	5	1660	0	18	0		91		28	0	59			29	4	64					
	7	1185	5	13	0			819	20	0	59			18	3	00	14				
	9	922	2	10	1		91		15	9	140			14	3	129					
8500	11	754	6	8	3				12	8				11	8						
	5	1680	0	18	2		91		20	6	60			25	4	65					
	7	1200	0	3	1		91		20	0				18	3	00	15				
8600	9	933	3	10	2			18	15	5	140			0	14	3	129				
	11	763	7	8	4				12	8				11	8						
	5	1700	0	18	2		92		28	1	60			20	0	65					
8700	7	1214	2	13	1			36	20	1	60			18	4	00	50				
	9	944	4	10	2		92		15	6	141			49	14	4	130				
	11	772	8	8	4				12	9				11	9						
8800	5	1720	0	18	3		92		28	3	60			20	2	65					
	7	1228	4	13	2			44	20	3	60			18	6	00	50				
	9	955	5	10	3		93		15	8	143			20	8	132					
8900	11	781	9	8	5				13	0				12	0						
	5	1740	0	18	3		93		28	2	61			26	1	66					
	7	1242	4	13	2			51	20	2				19	5	00	50				
9000	9	966	6	10	3		93		15	7	142			38	10	3	131				
	11	790	10	8	6				12	10				11	10						

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	5	1760	0	10	4	93		28	4	61	26	2	66	
8800	7	1257	1	13	3		58	20	4	16	18	6		22
	9	977	7	10	4	94		16	0	144	14	6	132	
	11	800	0	8	6			13	1		13	0		
	5	1780	0	18	4	49		15	0	61	26	4	66	
8900	7	1271	3	13	3		64	20	5		9	1		56
	9	988	8	10	4	49		16	1	145	14	8	134	
	11	809	1	8	6			13	2		12	2		
	5	1800	0	19	5	49		29	0	62	26	4	67	
9000	7	1285	5	13	4		70	20	5		10	19	1	22
	9	1000	0	10	5			16	1	145	14	8		
	11	818	2	8	7	95		13	2		12	2	134	
	5	1820	0	19	0	95		29	1	62	27	0	67	
9100	7	1300	0	13	4		75	20	6		19	2		55
	9	1011	1	10	5			16	2	146	15	0	135	
	11	827	3	8	7	95		13	3		12	3		
	5	1840	0	19	1	95		29	1	63	27	0	68	
9200	7	1314	2	13	5		80	20	6		2	19	2	20
	9	1022	2	10	6	96		16	2	146	15	0	135	
	11	836	4	8	8			13	3		12	3		
	5	1860	0	19	1	96		30	0	62	27	1	68	
9300	7	1328	4	13	5		84	21	3		0	19	3	52
	9	1033	3	10	6	96		16	6	150	15	1		
	11	845	5	8	8			13	7		12	4	136	
	5	1880	0	19	2	96		19	4	63	27	3	68	
9400	7	1342	6	13	6		88	21	2		13	19	5	16
	9	1044	4	10	7	97		16	5	149	15	3		
	11	854	6	8	9			13	6		12	6	138	
	5	1900	0	19	2	97		25	3	64	27	2	69	
9500	7	1357	1	13	6		91	21	1		28	14	6	47
	9	1055	5	10	7			16	4	148	15	2		
	11	863	7	9	9	97		13	5		12	5	137	

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9600	5	1920	0	19	3	97		30	0	64	27	41	66	
	7	1371	3	13	7			21	3		19	5	9	
	9	1036	6	10	0	98	94	16	6	150	15	4	139	
	11	872	8	8	10			3	7		12	7		
9700	5	1940	0	19	3	98		30	0	64	28	0	69	40
	7	1385	5	14	0			21	3		20	0		
	9	1077	7	10	8	98	95	16	6	150	25	5	140	
	11	881	9	8	10			13	7		12	8		
9800	5	1960	0	20	0	98		30	3	64	28	0	70	
	7	1409	0	14	2		0	21	6		20	0		9
	9	1088	8	1	1	100		17	0	153	15	5	140	
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9900	5	1980	0	20	0	99		30	2	65	28	1	70	30
	7	1414	2	14	2		0	21	5		20	1		
	9	1100	0	11	1	100		16	8	152	15	6	141	
	11	900	0	9	1			13	9		12	6		
10000	5	2000	0	20	0	100		30	3	65	28	4	69	54
	7	1428	4	14	2		0	21	6		20	4		
	9	1111	1	11	1	100		17	0	153	16	0	144	
	11	909	1	9	1			13	10		13	1		
10100	5	2020	0	20	1	100		30	3	66	28	2	71	18
	7	1442	6	14	3		0	21	6		20	2		
	9	1122	2	11	2	101		17	0	153	15	7	142	
	11	918	2	9	2			13	10		12	10		
10200	5	2040	0	20	2	100		30	4	66	28	3	71	47
	7	1457	1	14	4		0	22	0		20	3		
	9	1133	3	11	3	102		17	1	154	15	8	143	
	11	627	3	9	3			14	0		13	0		
10300	5	2060	0	20	1	101		31	3	65	28	3	72	
	7	1471	3	14	3		99	22	4		20	3		4
	9	1144	4	11	2	101		17	5	158	15	8	143	
	11	936	4	9	2			14	4		13	0		



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	5	2080	0	20	2	101		31	0	67		28	4	72	
10400	7	1485	5	14	4		98	22	1		15	20	4		32
	9	1555	5	11	3	102		17	2	155		16	0		
	11	945	5	9	3			14	1			13	1	144	
	5	2100	0	20	2			31	1	67		29	0		
10500	7	1500	0	14	4	102		22	2		48	20	5	72	
	9	1166	6	11	3		96	17	3	156		16	1		60
	11	954	6	9	3	102		14	2			13	2	145	
	5	2120	0	20	3			31	3	67		29	0		
10600	7	1514	2	14	5	102		22	4			20	5	73	
	9	1177	7	11	4		94	17	5	158		14	16	1	15
	11	963	7	9	4	103		14	4			13	2	145	
	5	2140	0	20	3			32	0	67		29	1		
10700	7	1528	4	14	5	103		22	6		0	20	6	73	
	9	1188	8	11	4		91	17	7	160		16	2		42
	11	972	8	9	4	103		14	6			13	3	146	
	5	2160	0	20	4			32	1			29	2		
10800	7	1542	6	14	6	103		23	0	67		21	0	73	
	9	1200	0	11	5		88	17	8	161		13	16	3	69
	11	981	9	9	5	104		14	7			13	4	147	
	5	2180	0	20	4			32	0			29	2		
10900	7	1557	1	14	6	104		22	6	68		21	0	74	
	9	1211	1	11	5		84	17	7		20	16	3		22
	11	910	10	9	5	104		14	6	160		13	4	147	
	5	2200	0	21	0			32	1	68		29	3		
11000	7	1571	3	15	0	104		23	0			21	1	74	
	9	1222	2	11	6		80	17	8		52	16	4		48
	11	1000	0	9	6	105		14	7	161		13	5	148	
	5	2220	0	21	0			32	0	69		29	3		
11100	7	1585	5	15	0	105		22	6			21	1	75	
	9	1235	3	11	6		75	17	7		60	16	4		0
	11	1005	1	9	6	305		14	6	160		13	5	148	

	i	ii	iii	iiii	v	vi	vii	viii	ix	x	xi	xii	xiii	xiiii	xv	xvi
	5	1240	0	21	1	106		32	2	69	29	4	75			
11200	7	1661	3	13	1		70	23	1		21	2				
	9	124	1	13	7			18	0	162	22	16	5			
	11	110	1	9	7	107		14	8			13	6	142		
	5	1260	0	21	1			32	1	70		30	3			
11320	7	1614	2	13	1	106		23	0			21	3	75		
	9	1255	5	11	7		64	17	8	161	30	16	6			50
	11	1027	3	9	7	106		14	7			13	7	150		
	5	1280	0	21	2			33	0	69		30	2			
11400	7	1628	4	13	2	106		23	4			21	3	76		
	9	1266	6	11	8		58	18	3	11	15	16	6			0
	11	1036	4	9	8	107		13	0	165		13	7	150		
	5	1300	0	21	2			32	4	70		30	1			
11500	7	1642	6	13	2	107		23	3			21	4	76		
	9	1277	7	11	8		51	18	2		20	16	7			24
	11	1045	5	9	8	107		14	10	164		13	8	152		
	5	1320	0	21	3			33	0			30	2			
11600	7	1628	4	13	3	107		23	4	70		21	5	76		
	9	1288	8	12	0		44	18	3	165	50	16	8			48
	11	1054	6	9	9	108		15	0			13	9	153		
	5	1340	0	21	3			33	2	70		30	3			
11700	7	1671	3	13	3	108		23	6			21	6	76		
	9	1309	5	12	0		36	18	5		10	17	0			72
	11	1063	7	9	9	108		15	2	167		13	10	153		
	5	1360	0	21	4			33	1	71		30	3			
11800	7	1685	5	13	4	108		23	5			21	6	77		
	9	1311	1	12	1		28	18	4		14	17	0			15
	11	1072	8	9	10	109		15	1	166		13	11	153		
	5	1380	0	21	4			33	2	71		30	4			
11900	7	1700	0	13	4	109		23	6			22	0	77		
	9	1322	2	12	1		19	18	5		43	17	1			4
	11	081	9	9	10	109		15	2	167		14	2	154		

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	5	2400	0	22	0	109		33	4	71		31	0	77	
12000	7	1714	2	15	5		10	24	1			22	1		55
	9	1333	3	12	2	110		18	7	169		17	2		
	11	090	10	10	0			15	4			14	1	155	
	5	2420	0	22	0			33	3	72		21	0		
12100	7	1728	4	15	5	110		24	0			22	1	78	
	9	1344	4	12	2		0	18	6	168		17	2		10
	11	1100	0	10	0	110		15	3			14	1	155	
	5	2440	0	22	0			33	4	72		31	1		
12200	7	1742	6	15	5	110		24	1			22	2	78	
	9	1355	5	12	2		100	18	7	169		17	3		32
	11	1109	1	10	0	110		15	4			14	2	156	
	5	2460	0	22	1			34	5	72		31	2		
12300	7	1757	1	15	6	110		24	2			22	3	78	54
	9	1366	6	12	3		90	18	8	170		17	4	157	
	11	1118	2	10	1	111		15	6			14	3		
	5	2480	0	22	1			34	2	72		31	3		
12400	7	1771	3	15	6	111		24	4			22	4	78	
	9	1377	7	12	3		79	19	1	17		17	5	158	76
	11	1127	3	10	1	111		15	7			14	4		
	5	2500	0	22	2			34	1	73		32	0		
12500	7	1785	5	16	0	111		24	3			22	6		20
	9	1388	8	12	4			19	0	171		17	7	160	
	11	1136	4	10	2	112		15	6			14	6		
	5	2520	0	22	2			34	2	7		31	4		
12600	7	1800	0	16	0	112		24	4			22	5		39
	9	1400	0	12	4		56	19	1			17	6	159	
	11	1145	5	10	2	112		15	7	172		14	5		
	5	2540	0	22	3			34	3	73		32	0		
12700	7	1811	1	16	1	112		24	5			22	6		
	9	1411	1	12	5		44	19	2			17	7	60	50
	11	1154	6	10	3	113		1	8	173		14	6		



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	5	2560	0	22	3	113		34	2	74		32	0	80	
12800	7	1825	1	16	1		31	24	4		72	22	6		0
	9	1422	2	12	5			19	1	172		17	7		
	11	163	7	10	3	113		15	7			14	6	16	
	5	2580	0	12	4			34	4	74		32	1		
12900	7	1842	6	16	2	113	38	24	6		24	23	0	80	
	9	1433	3	12	6			19	3	174		17	8		10
	11	1172	8	10	4	114		15	9			14	7	161	
	5	2600	0	22	4			35	0	74		32	2		
13000	7	1857	1	16	2	114		25	0			23	1	80	
	9	1444	4	12	6		4	19	4		50	18	0		40
	11	1181	9	10	4	114		15	10	175		14	8	162	
	5	2620	0	22	4			34	4	75		32	1		
13100	7	1871	3	16	2	114	104	24	6		50	23	0	81	50
	9	1455	5	12	6			19	3	174		17	8		161
	11	1190	10	10	4	114		15	9			14	7		
	5	2640	0	23	0			35	1	75		32	2		
13200	7	1885	5	16	3	114		25	1		0	23	1		
	9	1466	6	12	7		90	19	5	176		18	0	162	78
	11	1200	0	10	5	115		16	0			14	8		
	5	2660	0	23	0			35	2	75		32	4		
13300	7	1900	0	16	3	115	75	25	2			23	3		
	9	1477	7	12	0			19	6		25	18	2	164	
	11	1209	1	10	5	115		16	1	177		14	10		
	5	2680	0	23	1			35	1	76		32	3		
13400	7	1914	2	16	4	115	60	25	1			23	2		
	9	1488	8	12	8			19	8		24	18	1	163	34
	11	1218	2	10	6	116		16	0	176		14	9		
	5	2700	0	23	1			35	2	76		32	4		
13500	7	1928	4	16	4	116		25	2			23	3		
	9	1500	0	12	8		44	19	6		48	18	2	164	52
	11	1227	3	10	6	116		16	1	177		14	10		

i	ii	iii	iiii	v	vi	vii	viii	ix	x	xi	xii	xiii	xiiii	xv	xvi
13600	5	2720	0	23	2	116		35	3	76		33	0	82	
	7	1942	6	16	5		28	25	3		72	23	4		70
	9	1511	1	13	0	117		19	7	178		18	3	165	
	11	1236	4	10	7			16	2			15	0		
13700	5	2740	0	23	2	117		36	0	76		33	0	83	
	7	1671	3	16	5		11	25	5		30	23	4		5
	9	1522	2	13	0	117		20	0	180		18	3	165	
	11	1245	5	10	7			16	4			15	0		
13800	5	2760	0	23	2	117		35	4	77		33	1	83	
	7	1971	3	16	5		111	25	4		17	23	5		22
	9	1533	3	13	0	117		19	8	179		18	4	166	
	11	1254	6	10	7			16	3			15	1		
13900	5	2780	0	23	2	117		36	0	77		33	2	83	
	7	1987	1	16	6		94	25	5		40	23	6		39
	9	1544	4	13	1	118		20	0	180		18	5	167	
	11	1263	7	10	8			16	4			15	2		
14000	5	2800	0	23	3	118		36	1	77		33	3	83	
	7	2000	0	16	6		76	25	6		63	24	0		56
	9	1555	5	13	1	118		20	1	181		18	6	168	
	11	1272	8	10	8			16	5			15	3		
14100	5	2820	0	23	4	118		36	3	77		33	2	84	
	7	2014	2	17	0		58	26	1		9	23	6		72
	9	1566	6	13	2	119		20	3	183		18	5		
	11	1281	9	10	9			16	7			15	2	167	
14200	5	2840	0	23	4	119		36	2	78		33	4	84	
	7	2028	4	17	0		39	26	0		4	24	1		4
	9	1577	7	12	7	119		20	2	182		18	7	169	
	11	1290	0	0	9			16	6			15	4		
14300	5	2850	0	24	0	119		36	3	78		33	0	84	
	7	2042	6	17	1		20	26	1		26	24	2		20
	9	1588	8	13	3			20	3	183		18	8		
	11	1200	0	10	10	120		16	7			15	5	170	

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		5	2880	0	24	I			36	4	78		33	4	85	
14400	7	2057	1	17	2	119	I		26	2			24	1		33
	9	1600	0	13	4	120			20	4	184	48	18	7	169	
	11	1309	1	11	0				6	8			15	7		
14500	5	2900	0	24	0	120	100		37	0	78		34	0	85	50
	7	2071	3	17	1				26	3		70	24	2		
	9	1611	1	13	3	120			20	5	185		18	8	170	
14600	11	1318	2	10	10		80		16	9			15	5		
	5	2920	0	24	1	120			36	4	79		34	1	85	
	7	2085	5	17	2				26	2		64	24	3		55
14700	9	1622	2	13	4	121	59		20	4	184		19	0	171	
	11	1327	3	11	0				16	8			15	6		
	5	2940	0	24	1	121			37	1	79		34	2	85	80
14800	7	2100	0	17	2		38		26	4		6	24	4		
	9	1633	3	13	4	121			20	6	186		19	1	172	
	11	1336	4	11	0				16	10			15	7		
14900	5	2960	0	24	2	121	16		37	0	80		34	2	86	8
	7	2114	2	17	3				26	3		0	24	4		
	9	1644	4	13	5	122			20	5	185		19	1	172	
15000	11	1345	5	11	1		116		16	9			15	7		
	5	2980	0	24	2	122			37	1	80		34	3	86	22
	7	2128	4	17	3				26	4		20	24	5		
15100	9	1655	5	13	5	122	94		20	6	186		19	2	173	
	11	1354	6	11	1				16	10			15	8		
	5	3000	0	24	2	122			37	2	80		34	4	86	36
15200	7	2142	6	17	3		116		26	5		40	24	6		
	9	1666	6	13	5	122			20	7	187		19	3	174	
	11	1327	3	11	1				17	0			15	9		
15300	5	3020	0	24	3	122	94		37	3	80		34	3	87	
	7	2157	1	17	4				26	6		60	24	5		49
	9	1672	7	13	6	123			20	8	188		19	2	173	
	11	1372	8	1	2				17	1			15	8		



	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiiii	xv	xvi
15200	5	3040	0	24	3			123		38	0	80		34	4	87
	7	2171	3	17	4			123	71	27	1		0	24	6	87
	9	1688	8	13	6			123		21	1	190		19	3	174
	11	1381	9	11	2					17	3			15	9	
15300	5	3060	0	24	4			123		37	3	81		25	0	87
	7	2185	5	17	5				48	26	6		72	25	0	87
	9	1700	0	13	7			124		20	8	188		16	4	175
	11	1390	10	11	3					17	1			15	10	
15400	5	3080	0	24	4			124		38	0	81		35	0	88
	7	2200	0	17	5				24	27	1		10	25	0	88
	9	1711	1	13	7			124		21	1	190		19	4	175
	11	1400	0	11	3					17	3			15	10	
15500	5	3100	0	25	0			124		38	1	81		35	1	88
	7	2214	2	17	6				0	27	2		29	25	1	88
	9	1722	2	13	8			125		21	2	191		19	5	176
	11	1409	1	11	4					17	4			16	0	
15600	5	3120	0	25	0			124		38	0	82		35	2	88
	7	2228	4	17	6				100	27	1		20	25	2	88
	9	1733	3	13	8			125		21	1	190		19	6	177
	11	1418	2	11	4					17	3			16	1	
15700	5	3140	0	25	0			125		38	1	82		35	3	88
	7	2242	6	17	6				71	27	2		38	25	3	88
	9	1744	4	13	8			125		21	2	191		19	7	178
	11	1427	3	11	4					17	4			16	2	
15800	5	3160	0	25	1			125		38	2	82		35	2	89
	7	2257	1	18	0				50	27	3		56	25	2	89
	9	1655	5	14	0			126		21	3	192		19	6	177
	11	1436	4	11	5					17	5			16	1	
15900	5	3180	0	25	1			126		38	3	82		35	3	89
	7	2271	3	18	0				24	27	4		74	25	3	89
	9	1766	6	14	0			126		21	4	193		19	7	178
	11	1445	5	11	8					17	6			16	2	

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	5	3200	0	25	I		39	0	82	35	4	89	55
16000	7	228	4	18	0	125	27	6		25	4		
	9	1777	7	4	0		21	6		10	8		
	11	1454	6	11	5	126	17	8	195		3	179	
	5	3220	0	25	2		38	3	83	36	0		
16100	7	1300	0	18	1	125	27	4		25	5	89	30
	9	1788	8	14	1		2	4		20	0	180	
	11	1463	7	1	6	127	17	6	193	16	4		
	5	3240	0	25	2		39	0	83	36	0	90	
16200	7	2314	2	18	1	127	28	6		25	5		0
	9	1800	0	14	1		21	6		20	0	180	
	11	1472	8	11	6	127	17	8	195	16	4		
	5	3260	0	25	3		39	1	83	36	1	90	
16300	7	2328	4	18	2	127	28	0		25	6		10
	9	1811	1	14	2		21	7		20	1	181	
	11	1481	9	11	7	128	17	9	195	16	5		
	5	2280	0	25	3		39	0	84	36	1	90	
16400	7	2242	6	18	2	128	27	6		25	6		20
	9	1822	2	14	2		21	6	195	20	1	181	
	11	1490	10	11	7	128	17	8		16	5		
	5	3300	0	25	3		39	1	84	36	1	91	
16500	7	2357	1	18	2	128	28	0		25	6		29
	9	1833	3	14	2		21	7		20	1	181	
	11	1500	0	11	7		17	9	196	16	5		
	5	3320	0	25	4		39	2	84	36	2	91	
16600	7	2371	3	18	3	128	28	1		26	0		38
	9	1844	4	14	3		21	8	197	20	2	182	
	11	1509	1	11	8	129	17	10		16	6		
	5	3340	0	25	4		39	3	84	36	3	91	
16700	7	2385	5	18	3	129	28	2		26	1		47
	9	1855	5	14	3		22	0	198	20	3	183	
	11	1518	2	1	8	129	18	0		16	7		

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	5	3360	0	26	0			40	1	84		36	4		91	
16800	7	2400	0	18	4	129	30	28	2			26	2			56
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	11	1536	4	11	9	130		18	0			16	7			
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17000	7	2428	4	18	4	130		28	4	85		26	2			72
	9	1888	8	14	4		100	22	2		0	20	4		184	
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	9	1911	1	14	5		39	22	2		0	20	6		186	
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	9	1944	4	14	6		76	22	5	203		20	8		188	
	11	1590	10	12	0	132		18	5			17	1			



i ii iii iiii v vi vii viii ix x xi xii xiii xiiii xv xvi

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17700	7	2528	4	19	0		11	29	0		39	26	6	28
	9	1966	6	14	7	133		22	5	203		20	8	188
	11	1609	1	12	1			18	5			17	2	
	5	3560	0	26	3	133		40	4	87		37	4	94
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	9	2011	1	14	8	135		22	5	205		21	1	190
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i ii iii iv v vi vii viii ix x xi xii xiii xiiii xv xvi

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8e	11	1736	4	12	6	138	19	3		17	9		

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i	ii	iii	iiii	v	vi	vii	viii	ix	x	xi	xii	xiii	xiiii	xv	xvi
20000	5	4000	0	28	1	141		43	2			40	0		
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	11	1818	2	12	5			19	8	217		18	2	200	

G. II.





## A generall reconing.

10007  
**B**E now for further declaration  
of that which hath bene hereto  
said, and of that which is now  
to be spoken of, for the quicke &  
readie arming of a battaile, pre-  
supposing first be the foresaid  
tables, the length and breadth  
of that battaile, it is to be noted,  
as I suppose for the first way,  
wherein such sort of souldiers be found in a ray, that all  
the pikes of all the companies, be set together in the  
middle of all the armed pikes of all the companies,  
that is, that the one part of these armed pikes do go be-  
fore, and the other behind the whole array.

Or else, to make a more faire number, as is wont  
to be done in marching after this other sort, that the  
unarmed pikes of euery particuler companye haue  
one part of their armed pikes, that are in that parti-  
culer company before, and the other behind.

Or else after an other manerly order, as at what  
time the Captaine doth commaund, that first there  
goe such a quantitie of armed pikes before the whole  
ray, and that there doe remaine as many more be-  
hinde the same ray, that may be sufficient to arme,  
according to the proportion of the rest of the armed  
pikes, the two flanches of the battaile: and that the  
middle part be deuised into so many maniples, or  
partes as we will call the, as with their armed pikes  
before and behinde, they may make one with an other,  
the entiere length of the same battaile, if neede were  
to reduce them together. And of all these aboue saide  
sortes of arming readie, here following shalbe made  
a generall reconing, which shall serue for any num-  
ber of souldiers, that are to be set in a battaile, and to be  
quickly armed.

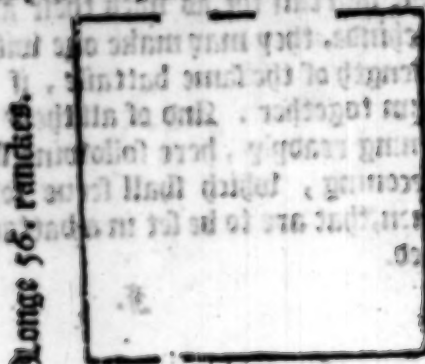


## A generall reconing.

**N**ow let vs put the case, that there were 5000. footemen of vnarmed pikers, and 1450. armed with Corletes, which are in all 6450. the which would be reduced into a square battaile of ground this being a more profitable way, than that of people, thou shalt enter the tables, in the first Columne, taking 6450. the number most nere vnto it, because it skilleth little if it be 6400. and ouer against 6400. in the sixtenth Columne, thou shalt finde that the battaile ought to be 56. in length, and 114 in breadth. And in the sixtenth Columne thou shalt finde an ouerplus of 16. footemen, whē the same battaile shalbe set, the which 16. footemen, thou shalt adde to the 50. that did excede of the abovesaid 6450. footemen, and they will make 66. footemen. After thou shalt see how many times the length of the battaile (being considered from the best to backe) which is 56. is to be found in this number of 66. and thou shalt finde it once, and an ouerplus of 10. footemen, and for this one time, that the number 56. is found in 66. there shalbe one added to the breadth of the battaile, & they shall make 115. footemen in breadth from shoulder to shoulder. And thus thou shalt haue the battaile 56. ranches long and 115. footemen in a ranche proper, as is to be seene by this figure: and there exceedeth 10. footemen, & which ten I do not place in the battaile.

The figure of the generall reconing.

Broad 115 footemen in a ranche.



## of the generall reconing.

And who that desireth to know further the 6450 footemen, doe marche in aray (as expert warryers will haue it by odde numbers) from 3. the lesser number, vnto 11. the greater, ordinate in a ranke in breadth, for so many ranches, as are to be, supposing then that they marche by fife in a ranke, sette in the seconde Columne, the number of fife, and ouer against it in the thirde Columne, thou shalt finde that there ought to be 1280. ranches. But because there is not to be founde in the tables, other then the number of 6400. thou shalt take that which is the ouerplus, that is 50. it will make tenne ranches more, the which thou shalt adde to the 1280. ranches, and they will make 1290. ranches, thus 6450. footemen going in aray by 5. in a ranke, shalbe 1290. ranches, the like is to be vnderstande of the rest. Besides thou shalt see how many ranches the 1450. armed Pykes ought to be in length, and how many doeth exceede ouer and aboute the ranche. In this sorte thou shalt deuide those armed pykes by the breadth of the battaile, which is 115. thereof shal come 12. ranches in length, and an ouerplus of 70. armed pykes, the which, because they do not make an entier ranke, are afterwards placed in that part of the battaile, that shall seme to thy Sergeant. of greatest necessitie: and thus thou shalt finde y where the whole battaile ought to be 36. ranches long: & that the armed pykes are 12. ranches, it remaineth that the length of the vnarmed ought to be 44. ranches, the which shalbe in the midst. The like reconing is to be made, if any will make a square battaile of number of people: not so much for to see the length & breadth with the armed ranches, and that which doeth exceede both within & without of this battaile, of a number of 5000. vnarmed footemen, and of 1450. armed with Collets, as also of what so euer other number, be it greater, or lesser then the aboue said.

## .giving Examples. 20

The which foresaid reconing it is supposed that the generall doth know it, (or some other person) to whom it doth appertain to geue order of the maner, how to arme the battaile: to the end that hauing it in memorie, he may not say vpon other, then to commaund his Captaines, or Sergeantes to set the same in a readines, as in the examples folowing shall be shewed.

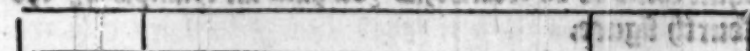
### THE FIRST EXAMPLE.

**N**ow in case there be a number of 6450. footmen, betwene armed and vnarmed pikes, and that the vnarmed be 1450. and the armed 5000. as is before set forth in the generall reconing, and that this number of footmen were with speede to be set into a battaile armed with Corsettes, it is necessarie that the Generall or some other, haue well in minde the reconing of the length and breadth of the whole battaile, and severally of the armed and vnarmed pikes, to the end that if occasion do hap, as I haue already said, none other is to be done, than to commit to his Sargiants the order that they are to obserue in arming the battaile. And so let vs put the case that the length thereof be 56. ranckes, at 115. footmen in a rancke in breadth, in this sort, that is 12. ranckes in length of armed Corsettes, and an ouerplus of 70. armed footmen, and 44. ranckes of vnarmed, as is to be seene before in the generall reconing. In arming of the which battaile, let vs presuppose the first aboue named maner: that is, when those people do march in a raie, at as many as they will in a rancke, as well in length, as in breadth, with the vnarmed pikes in the midst, and all the armed pikes, part set before, and part behinde: as in the first figure is to be seene.



## The first figure

**A** raie, where one part of the armed Pikes do goe before, and the other behinde with the vnarmed Pikes in the middest.



**L**etting the Readers to vnderstand, that the yellow colour doth signifie the armed footmen with Corlets and the white the vnarmed. The which being supposed, there is committed to those armed ranches that goe before, that of them there be made seven ranches for the length, from brest to backe 115. men for the breadth, from shoulder, to shoulder, as by the second figure is made manifest.

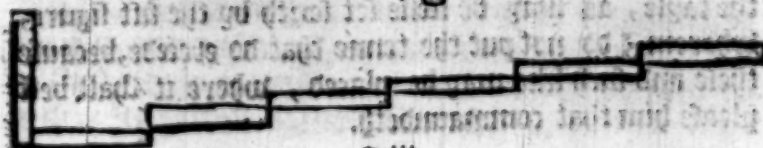
## The second figure.

Breadth 115. men.

Long 7 ranches.

Straight after let 44. ranches of vnarmed Pikes in length, be bestowed behind these armed ranches at as many in a ranche in breadth, for so many as are in the raie, as you see to be in the third figure.

## The third figure.



## Examples: 3d

And to 44. other ranckes of the next that are spoken of, shall approach in maner as is already sayde, doing orderly the like vnto the ende of the whole aray of the vnarmed pykes: because in this sort the whole battayle shall come to be framed, as you haue an example by the fourth figure.

### The fourth Figure:

Broad 115. footemen in a rancke.



When the raye of the vnarmed pykes shalbe thus framed & made into a battaile, from best to backe after the armed pykes at the head of the battaile, as is aboue sayde. A raye of armed pykes shalbe caused to march behind the vnarmed pykes, making fve ranckes in length at the tayle of the battaile, the which in thus doing, thou shalt finde to be 56. ranckes long, or as it pleaseth some to say 56. men, and 115. men brode in a rancke, with 7. ranckes of the armed pykes at the head, and 5. ranckes also of the same armed pykes at the tayle, as may be seene set south by the fift figure, wherein I do not put the tenne that do errede, because these and such like may be placed, where it shall best please him that commaundeth.

## to arme a battaile.

### The fift figure.

Byrde 115. footemen in a rancke.



**N**ow that one hath in this sort appointed his battaile as aboue, a couple expert in the art of war shall goe the one to the head, and the other to the taile, and take away one or two ranckes from the breadth of the battaile for the one, for to arme two flankes, that is, that each one of them take care to arme one rancke: one rancke in breadth, both make two and somewhat more in length, and if there were people there it would make little more then one: thus taking one rancke from the head, and an other from the taile, there shall be two in a rancke for each rancke, and so according to the number that shall be taken away in breadth, it shall be double in length, wherefore a battaile well appointed, would be double in breadth to the length, according to the iudgement of skilfull warriors, as well auncient as moderate.

And thus wee will suppose that there is taken from the head, and from the taile two ranckes according to the iudgement of him, that shall arme the two flankes of the battaile, or more or lesse, as occasion shall happen, & thus the battaile shall be. 52. ranckes long at 123. footmen



## Examples.

men in breadth for euerie rancke, and there doth ex-  
ceede tenne footemen, which are not in the body of the  
battaile, with fve ranckes of armed Pikes, at the head,  
and thre ranckes at y<sup>e</sup> taile, with foure in a rancke to  
the two flanches of the armed Pikes, in such soyte as is  
scene ordered by the first figure.

### The first figure.

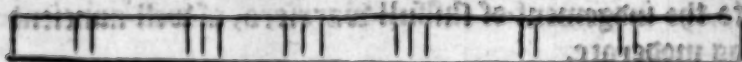
Word 1 2 3. footemen in a rancke.

Long 52. ranckes.



### The second example.

**B**Eing willing to arme a battaile quickly, according  
to the second maner aboue said, in marching com-  
panie by companie of euerie perticuler Captaine, and  
that each companie haue the one halfe of their armed  
Pikes at the head, and the other at the taile: The which  
may be expresse scene by the seventh figure.



**A**Waye wherein there goeth companie by companie,  
with the one halfe of their armed Pikes at the head  
and the other at the taile.

## Examples to arme a battaile.

**S**upposing therefore to haue in minde the selfe same  
 aboue said reoning, and that there are yet 5000.  
 footemen of vnarmed Pikes, and 1450. footemen  
 armed with Corsettes, with 56. in length, and  
 115. in breadth of y battaile, with seuen ranckes of  
 footemen armed with Corsettes at the headde, and fve  
 rancks at y taile of the same, none other is to be done,  
 but to commit to each one of the Captaines, that they  
 doe make with their armed and vnarmed Pikes 56.  
 ranckes, seteing seuen ranckes of those armed with cor-  
 settes at the headde, and fve ranckes at the taile. And  
 if any Captaine did lacke people to make the ranckes.  
 56. hee shall ioyne with another Captaine, so that be-  
 twene them two they may make 56. ranckes, putting  
 the ranckes of thone to the shoulde of the ranckes of  
 the other, in such sorte, as by this eight figure we haue  
 drawne forth that it should be.

### The eight figure.

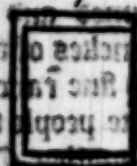


**A**nd they shall make the battaile 56. ranckes long  
 at a 115. footemen in a ranke in breadth, with seuen  
 ranckes of armed Pikes at the head, and fve ranckes  
 at the taile: as in the fift, seuenth, and this ninth figure  
 may be seene.

## Examples to arme a battaile.

### The ninth figure.

Broade 115. footemen in a rancke.



**T**he which battaile being ordered as you see; and being willing to arme the two flanches thereof, the same shalbe done, that is done in the sixte figure: And thus the battaile shalbe 52. ranckes long, at 123. footemen in a rancke broade, with five ranckes of armed pikers at the head, and thre ranckes at the taile, and foure footemen in a rancke of the armed pikers to each of the two flanches, as by the tenth figure we haue set forth a forme befoze your eyes.

### The tenth figure.

Broade 123. footemen in a rancke.





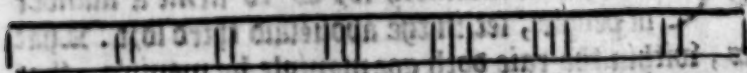
## Examples to arme a battaile.

The third example.

**N**ow there remaineth for vs to arme a number of people, set in the abovesaid third sort. What is, within the raie doth goe maniple by maniple, that is, that one part of the armed footmen, that ought to arme the two flanches of the entiere battaile, are deuided into two, and one part goeth before all the maniples, and the other behinde: and that beside that euery maniple hath one part of his particular armed pikes before, and one part behinde, in such sort as the armed and vnarmed pikes of this, such a maniple going in ararie, is to the full length of the battaile: the which let it bee said of all the other maniples. And for to order with reason these sortes of maniples, this is to be done, let vs suppose that the armed and vnarmed pikes, are to the number aboue written, with a determination to reduce the battaile to the selfe same length & breadth, and that you wil haue them to goe in ararie by fise in a rancke in breadth, you shall deuide the breadth of y battaile of the vnarmed pikes. Pikes which is 115. as may be seene aboue, by fise therof shal come 22. maniples, and an ouerplus of three. And thus euery maniple shal be 52. rancks long, at 5. footme in a rancke, with 5. ranckes of armed footmen at y head, & 3. ranckes at the taile, letting you to wit that the three ouerplus of 22. shall make in like sort a maniple in length: as here aboue from 3. footmen in a rancke in breadth, with 5. ranckes in length of armed footmen at the head, and 3. at the taile: But because this maniple of three in a rancke in breadth, cometh to bee more narrow than the other maniples, thou for to cause that the ray may goe with an euennesse, shalt cause this maniple to go by fise in a rancke in breadth: as in the eleuenth figure is to be seene.

## The eleuenth figure.

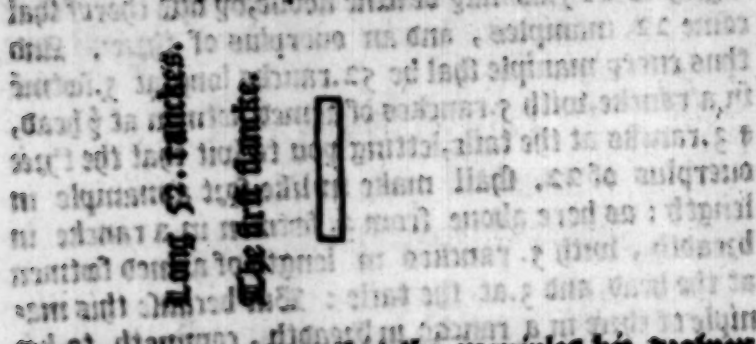
The raye wherein doth goe maniple by maniple, one part of the armed pikes at the head, and the other part at the tayle of the maniples.



Because these maniples happening after to be set in battaile, they shalbe set by three in a ranche in breadth, and straight there shalbe ioyned vnto them the rest of the battaile: the which being needeful to reduce into forme, none other is to be done, but that the armed pikes, that doe march before the whole maniples, doe stretch themselves forth to foure in a ranche in breadth, making 52 ranches in length, for a flanke of the battaile: as in the twelfth figure may clearly be perceyued.

## The twelfth figure.

Broade 4. footemen in a ranche.



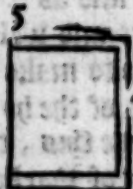
And to cause after that the maniples be drawn forth to the shoulder of this flanke, the one being armed to the side of the other. As in the thirtieth figure is shewed forth vnto vs.

Broade

## The thirteenth figure.

Broad 119. footemen in a ranche.

Long 52. ranches.

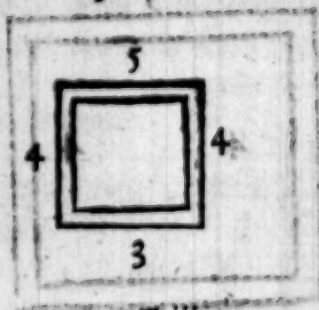


And they shall make the battaile 52. ranches long at 119. footemen in a ranche in breadth, with one flanke armed, at foure in a ranche, as in the thirteenth figure it is ordered. And this being done, the armed Wykes shall follow, as they may goe behinde the whole raye of the armed and unarmed Wykes: And they shalbe stretched south likewise to foure in a ranche from the other flanke. And the battaile shall come to be 52. ranches long at 123. footemen in a ranche in breadth, with five ranches of armed Wykes at the head, & three at the taylor, with foure in a ranche of the armed pykes to the two flankes, as by the forme in the fourteenth figure is to be shewed.

## The fourteenth figure.

Broad 123. footemen in a ranche.

Long 52. ranches.



C.iii.

With

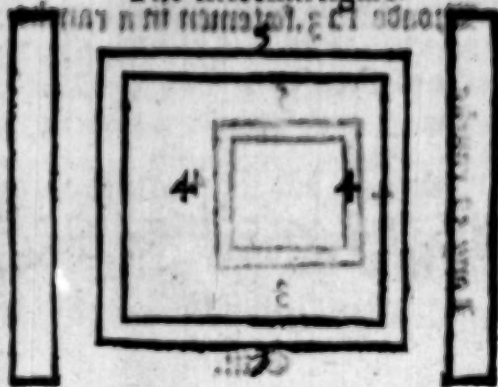


## Examples to arme a battaile.

With aduise that the Ansignes would be set and vnted together in the middest of the battaile: or else ouerthwart the same: and as it shal seme most best in making them most sure, and wel warded. It remaineth that we do intreat how to make the files of the harkabuzers, and winges of the ho:lemen. Aduising first each one that doth reade this, that although hetherto there is nothing spoken of Harkabuzers, neuerthelesse it is to be supposed that from the beginning, befoze the people be sette in arais, these harkabuzers, that is, that part which goeth before, ought to be the first to be there placed, and to make the file in such sort, as it be as long, or more, as neede requireth, as the length of the battaile is to be, and the which raie of harkabuzers is called a file. In this sort raising so many ranches of the same harkabuzers to remaine of those, that is, that do march befoze the raie of all the armed and vnarmed pikes, as is the length of the battaile from to, vnto 12, foemen in a ranche, in breadth, and to the shoulder of this file, the battaile shall come to be formed with these armed pikes round about, as is aboue said, vntill eight or twelue fote from the file. And the rest of the Harkabuzers that do march behinde the armed and vnarmed pikes, shall make another file on the other flanche of the battaile, distant, in proportion to the first: and as in the fiftenth figure appeareth.

The fiftenth figure.

The file of harkabuzers.



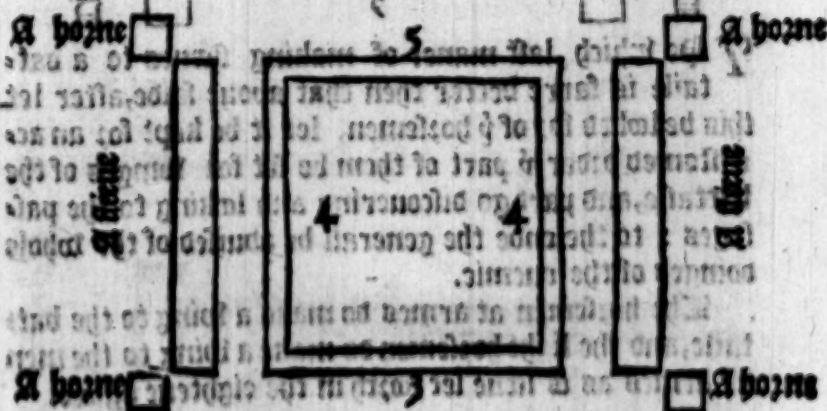
The file of harkabuzers.

## Examples to arme a battaile.

Thereof also aduertising the reader that the graine colour signifieth the barkabuzers, and the red, the men at armes, and the murreye the light horsemen.

After at the head of these files, on the one side may be made hoznes of barkabuzers; as is in the sixtenth figure.

### The sixtenth figure.

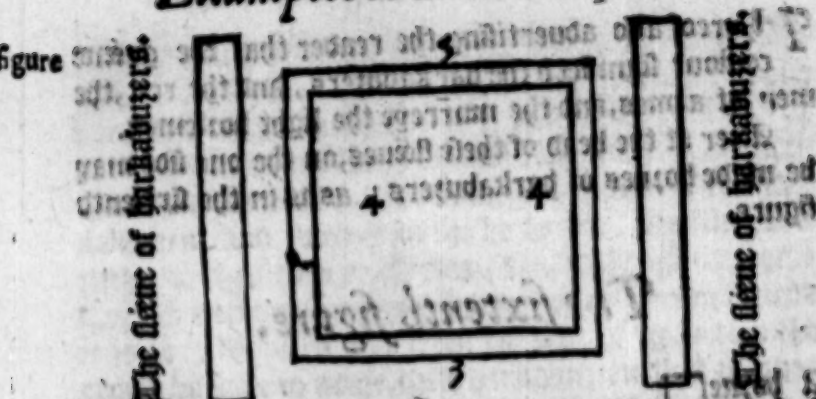


And if by any meanes there should exceede barkabuzers, they shalbe set together on one side for a succour to the horsemen, or where it were most expedient for the defence of themselves, or for the offence of the enemy. Not omitting to tell you, that the files of the barkabuzers may be made more long then the battaile, as is above saide: in such sorte as they should exceede beyond the head and taile of the battaile, because they might serue for hoznes: as in the seuententh figure is to be found.

### The seuententh figure.

## Examples to arme a battaile.

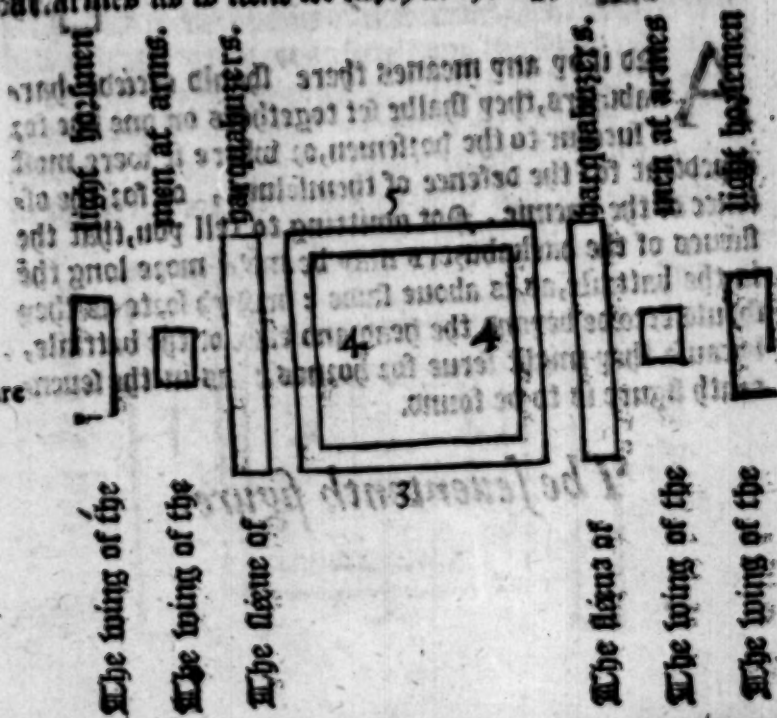
The 17 figure



**T**he which last maner of making sienes to a bat-  
taile is farre better then that aboue saide, after let  
this be looked for of y<sup>e</sup> horsemen, let it be kept for an ac-  
customed order, y<sup>e</sup> part of them be set for winges of the  
battaile, and part go discovering and looking to the pas-  
sages: to the ende the generall be aduised of the whole  
doinges of the enemye.

The horsemen at armes do make a wing to the bat-  
taile, and the light horsemen do make a wing to the men  
at armes as is here let forth in the eightene figure.

The 18 figure

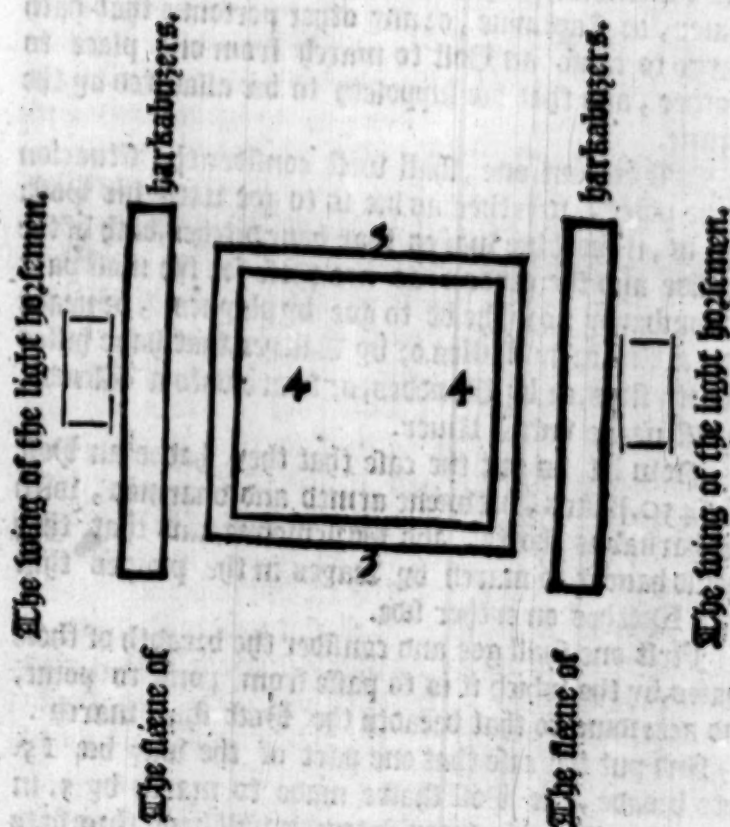




## Ex amples to arme a battaile.

**A**nd if by chaunce the men at armes were not,ther  
shalbe set for winges a part of the Light Horse  
men, and the other parte shall goe in be wing of the  
enemie: As is scene expressed and set forth in the nine  
tenth figure.

### The ninetenth figure.



*A way to march.*

## *A way to march.*

**G**euing you warning of importaunce, that the Horsemen in fight be distaunt as much as is possible from the battaile, least it should be an occasion in retiring from the enemy, to breake the ray of the battaile.

Lastly, putting you in minde that the Horsemen in their lodging would be as much as is possible couered and warded by the footemenne, because when they are to prepare themselves to armes, they are much more slower to be set in order, then are the footemen.

If a Generall, or Maister of the Campe, or Seargiant Maier, or Captayne, or any other personne that hath charge to cause an Host to march from one place to another, and that hee suppoeth to be assaulted by the enemy.

First such an one, shall well consider the situation of the place, whether as hee is to goe with his Host: that is, if there be waies that haue ditches, both of the one side and the other: as are those for the most part of Lombardy: or if he be to goe by playnes, or neare vnto a Hill, or by Hilles, or by Wallyes, that haue hilles on both sides, or by Wooddes, or neare vnto a Woodde, or else neare vnto a Riuer.

Now let vs put the case that they hadde an Host of 6450. Mikes, betwene armed and vnarmed, with the harkabus shotte, and Horsemenne, and that they would haue it to march by waies in the plaines that hath Ditches on eyther side.

First one shall goe and consider the breadth of those waies, by the which it is to passe from point to point, and according to that breadth the Host shall march.

And put the case that one part of the way be 15. fote broade, the Host shalbe made to march by 5. in a rancke: Because euery footeman will haue three fote in breadth, and if you would know how many ranckes  
of

## *A way to march.*

of footmen there are in 6450. thou shalt deuide 6450. by 5. thereof shall come 1290. ranckes, and so these footmen shall goe by 5. in a rancke, vntill such time as the way bee found moze broad, or moze narrow, and there the way shall be measured againe, and the reckoning shall be made as befoze, soz to see how many footmen goe in a rancke, and how many ranckes there are: Causing part of the harkabus shotte to march befoze the raie, and part behinde, and another to goe in succour of Hozsemen, that goe in viewing of the passages, and the imbushments, with the whole doinges of the enemye. And let another part bee soz a Vlantguard and Retroguard to the raie, to be able to serue them at neede, and another part goe allwaies at the flankes of the raie, which are passed the ditches on the one and the other side of the way, because the banckes of the ditches shall serue them soz a countermeure: when the hozsemen of the enemye should come to sette vpon the flankes of the raie. And if there were men at armes, I would that they should march on both sides of the raie, and also of the harkabuzers, that do march by the flankes of the battaile, or raie: And if there were no men at armes, I would that a part of the light hozsemen should serue in steede of the men at armes, as is abovesaid, because one part of the light hozsemen do serue soz Scoutes, both befoze and behind the raie: but yet in departing from their place, I would that they should faine to goe some other way, then to that place wherunto they purposed to goe. And allwaies when the host marcheth, I would haue abundance of labourers to make places plaine, to cast downe Bridges, to make defences, and other necessarie things that are required in marching.



## *A way to martch.*

And also perfect good guides, that are verie wel practised in the countrie: and if it march by the plaines, let the same order be kept, that is spoken of aboue, except the Pikes, I would that they should march in battaile: And if the hoast did marche neare vnto a hill, it shall keepe the pykes in battaile as much as may be, according to the greatnes of the waye: and sende of the light horsemen, and of harquabuzers to ouerlooke the hill, to the end the enemy take not the toppe of the hill from them, and in the rest to followe as is said in the first order.

And if it did marche ouer an hill, to keepe the pykes in battaile as much as is possible, & let part of the light horsemen, and harkabuzers, goe beewing the hill well, to the ende the enemy take not the toppe of the hill from them, and the rest to follow as in the first order.

And if it march through a valley betwene two hilles, there shall be sent light horsemen and harkabuzers to either hill to view it verie well, to the end the enemy take not the toppe of those hilles from them, and in the rest to follow as in the first order.

And if it march through wooddes, to keepe the pikes as much as is possible in battaile, and to send of the light horsemen and harkabuzers, to view all partes of the Woodde verie diligentlie, and for the rest to keepe the order after the first way.

And if it march neere vnto a Woodde, some shall goe to view the Woodde verie well, causing one part of the harkabuzers to march by the flankes, of the araine on the Woodde side, and the rest to follow as in the first order.

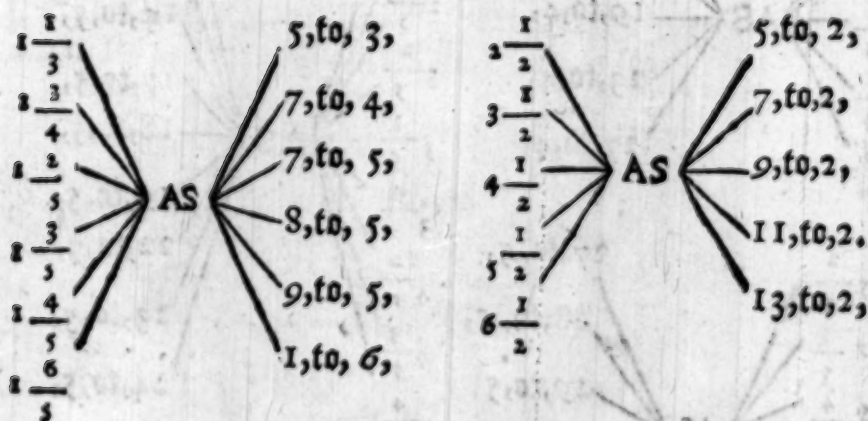
And if it march neere to a riuer, you shall doe as is said, for the marching neere a woodde, and in the rest to follow, as is appointed in the first way, the baggage shall march on the side where is least suspicion of the enemy, vnder their owne ensigne.

Let

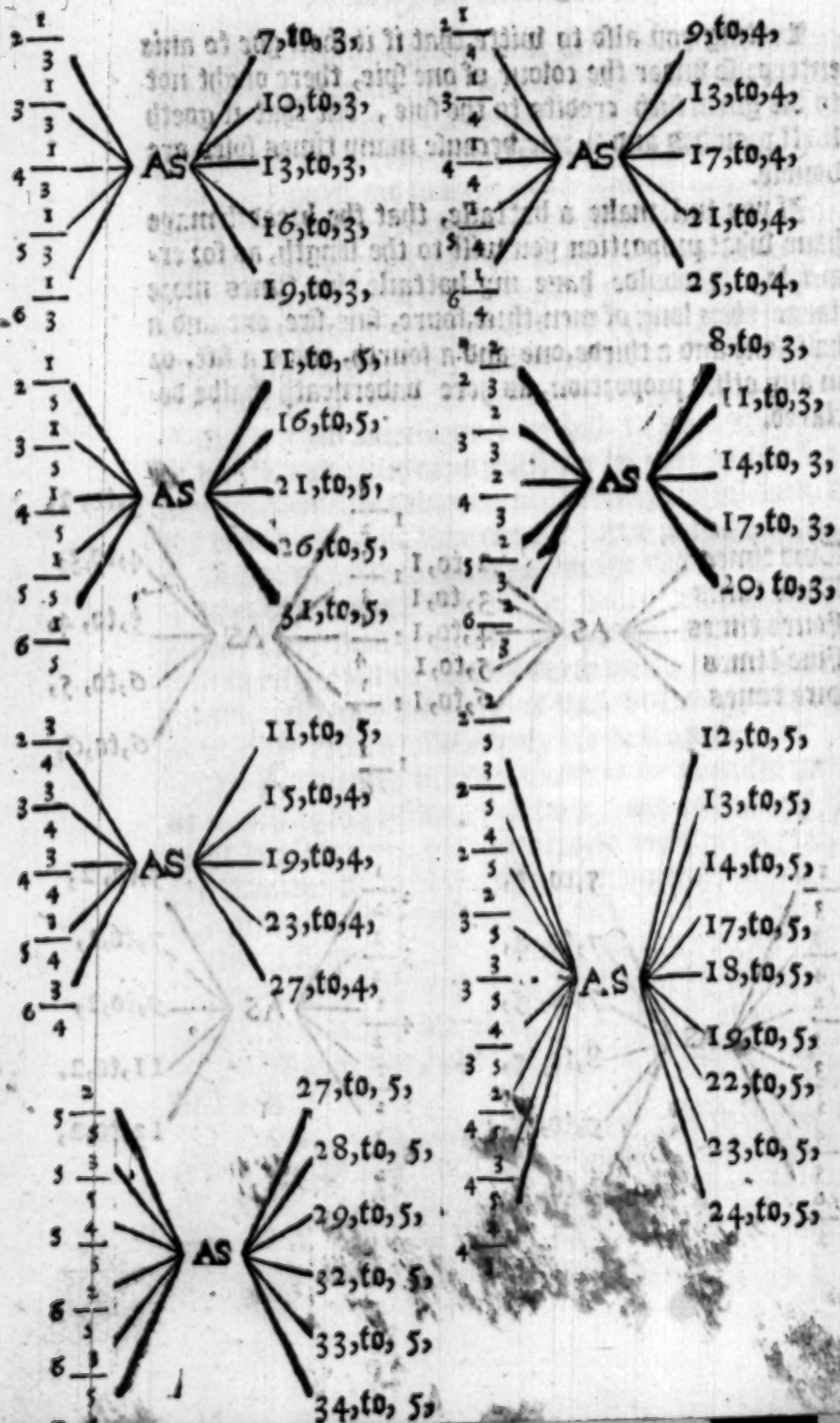
## A way to march.

Letting you also to witte, that if it shall goe to anie enterprise vnder the colour of one spie, there ought not to be giuen such credite to the spie, but that it goeth well prouided and warie, because many times spies are double.

If you will make a battaile, that the breadth maye haue what proportion you will to the length, as for example, I woulde haue my battaile two times more large than long of men, three, foure, five, sixe, one and a halfe, one and a thirde, one and a fourth, one & a fift, or in any other proportion, as here vnderneath shalbe declared.



1





## Examples to arme a battaile.

Having now set forth the proportions that may happen in setting of sundry battailes, here following shalbe declared, how to know them, and also how they are to be used in setting the same battailes.

First for to know the proportions, as one would say, I would know what proportion 3. is to 2. comparing the greater which is 3. to the lesser which is 2. 3. the greater shalbe deuided by 2. the lesser, wherof commeth

1. and  $\frac{1}{2}$  that is, the greater is one and a halfe more in proportion, then is the lesser: And if you compare the lesser which is 2. to 3. the greater, it shalbe saide 1. and

$\frac{1}{2}$  that is, the lesser is one & a halfe lesser in proportion, then is the greater: In like sorte if you would know the proportion of 19. to 4. where the greater is compared to the lesser, 19. the greater, shalbe deuided by 4. the lesser, where of both come 4. and  $\frac{3}{4}$  thus 19. to 4.

shall haue 4. and thre fourthes, in proportion, that is 19. the greater both containe foure and thre fourthes the lesser: And if you compare the lesser which is 4. to the greater, which is 19. 19. also the greater shalbe deuided by 4. the lesser, whereof both come 4. and  $\frac{3}{4}$  and

it shalbe said that 4. and thre fourthes lesser is contained in the greater, that is, that the lesser, is foure and thre fourthes lesse the greater, & by this rule shalbe knowen the proportion of any number to an other: Having already declared the proportion of one number to an other, here vnderneath shalbe declared how battailes are to be made, in what proportion soeuer one wil.

For example, let vs put the case that one would make a battaile, whose breadth were two and one third, more then the length, of men there shalbe set downe two numbers, that hath the proportion of two

and

## *Examples to arme a battaile.*

and a third, as is aboue declared, which shalbe as 7. to 3 whose pzeportion shalbe 2 and  $\frac{1}{3}$  that is, two and a third: And because we will haue the breadth greater then the length: the lesser number shalbe taken for the first, and the greater for the second, and the number of the people that are to be set in battaile, let vs put the case they were 6500. men betwene vnarmed Pikes, and Corslettes, as hereafter is to be seene.

The first.      The second.      The third.

3

7

6500

After let the second be multiplied by the third, that is 6500. by 7. will make 45500. and 45500. shalbe deuided by three, which is the first, and thereof shal come 15166, and there exceedeth 2. the which shalbe let goe, and no account to be made thereof at all, after ther shalbe taken the square roote of 15166. which shalbe 123. in a rancke, and that which doth exceede aboue the square roote, shalbe let go, as aboue, and for to haue the length of the battaile, the number of the men shal be deuided, that is, 6500. by 123. the breadth of the battaile, thereof shal come 52. for the length of the battaile, and 104. footemenne shal exceede, and 104. footemenne are two times 52. and there exceedeth neuer a footeman, and if there did exceede any, they should be footemenne, which are not to be accompted in the battaile: but yet for the seruice thereof, and two shalbe ioyned in a rancke, which shal make 125. footemenne in a rancke: thus we shal haue our battaile 52. ranckes long at 125. footemen in a rancke broad, which shal haue almost the pzeportion of breadth to the length,

as 7. to 3. for in deuiding 125. by 52. it maketh  $\frac{2}{5}$

which is a litle more then 7. deuided by 3. which make 2. and a third: thus we shal say that our battaile is

## *Examles to arme a battaile.*

52. ranckes long, and 125. footemen in a rancke broade,  
as in a figure shalbe seene.

Another example, if you would make a battaile, that  
had the breadth to the leangth, as 3. is to 1. that is; that  
the breadth were three times more then the length,  
wee will set forth a rule, that is, one for the first, 3. for  
the second, and the number of men for the third, as  
here vnderneath is to be seene.

The first,  
1

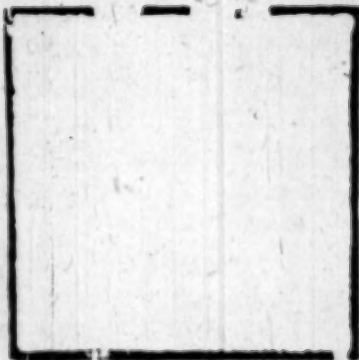
The second,  
3

The third,  
5600

Now the second shalbe multiplied by the third, and  
it will make 16800. and 16800. shalbe deuided by the  
first, that is 1. whereof shall come but 16800. because  
one doth niether deuide nor multiplie, and of 16800.  
we will take the square roote which shalbe 129. and ther  
doth exceed 159. whereof there is made no reconing,  
and 5600. which is the nuber of the people, shalbe deu-  
ded by 129. wherof doth come 43. which is the length,  
and there doth exceede 53. men, & of the 53. men we will  
set one in a rancke, which will make 43. ranckes at  
130. footemen in a rancke, and there doth exceede 10.  
footemen, as is seene here in this figure.

Broad 130. men in a rancke.

Long 43. ranckes.



3.

And



## *Examples to arme a battaile.*

And this battaile abovesaid hath his breadth to his length, as 3. is to 1. and these selfe same rules are to be made in any sort of battaile, and in any proportion that you will. The which aduices, with many other, entreated of by others, may with the help of God, bying this part of warfare enterprises to a good ende.

FINIS.

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1588.



